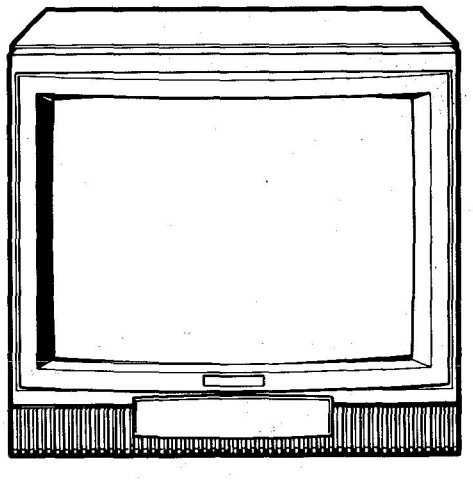
GoldStar

COLOUR TV SERVICE MANUAL

CAUTION

BEFORE SERVICING THE CHASSIS, READ THE "SAFETY PRECAUTIONS" IN THIS MANUAL.



CHASSIS PC-07X2

GoldStar

CONTENTS

Contents and Specifications 2
Safety Precautions 3
Servicing Precautions 4
Controls Location 6
Disassembly Instructions 8
Parts Location of Main Chassis 10
Adjustment Instructions 11
Troubleshooting Guide 14
Block Diagram 22
Wiring Diagram 28
Terminal View of Semiconductor 32
Schematic Diagram 33
Printed Circuit Board 57
Exploded View 61
Replacement Part List 69

SPECIFICATIONS

Power Source	AC 220V ±20%, 50/60Hz
Power Consumption	75W
Receiving TV System	CCIR STANDARD
Colour Receiving System	PAL/SECAM-B/G
Receiving Channels	PAL-B/G; 2-4 & S1, S21-S25, 5-12 & S2-S20
	SECAM-B/G; 2-4, 5-12, 21-69
Intermediate Frequency	
Picture	38.9 MHz
Sound	33.4 MHz
Colour	34.47 MHz
Tuning	Frequency Synthesizer
Audio Output	2W
Antenna Input Impedance	75 ohm IEC Type
Picture Tube	A51-EAL00X02
Speaker	90 × 50 mm
Dimension	511(W) × 476(D) × 468.5(H)mm
Weight	27.5 Kg

SAFETY PRECAUTIONS

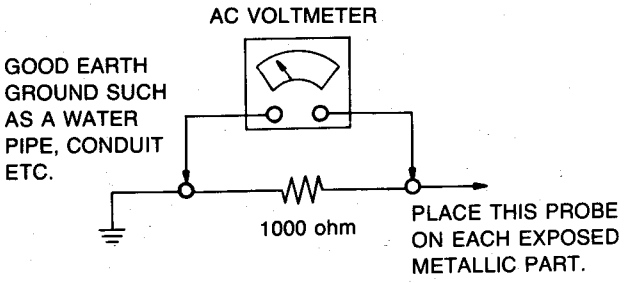
WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTIONS", "SAFETY INSTRUCTIONS" AND "PRODUCT SAFETY NOTICE" DESCRIBED BELOW.

X-RAY RADIATION PRECAUTIONS

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is 25.5KV at zero beam current (minimum brightness) under specified power source. The high voltage must not, under any circum stances, exceed 27.5KV. Each time a receiver requires servicing, the high voltage should be checked. It is recommended the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
2. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
3. Some parts in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY INSTRUCTIONS

1. Potentials as high as 25,000—27,000 volts are present when this receiver is operating. Operation of the receiver outside the cabinet or with the back cover removed involves a shock hazard from the receiver.
   (1) Servicing should not be attempted by anyone who is not throughly familiar with the precautions necessary when working on high-voltage equipment.
   (2) Always discharge the picture tube anode to the CHASSIS GROUND to reduce the shock hazard before removing the anode cap.
   (3) Discharge the high potential of the picture tube before handling waring risk of implosion handle with care.
2. If any Fuse in this TV receiver is blown, replace it with the FUSE specified in the chassis parts list only.
3. When replacing parts or circuit boards, wind the lead wires around terminals before soldering.
4. When replacing a high wattage resistor (oxide metal film resistor) in circuit board, keep the resistor 10 mm away from circuit board.
5. Keep wires away from high voltage or high temperature components.
6. This TV receiver should be connected to AC 180—270V.
7. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screwheads, metal overlays, control shafts etc, to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 180—270V AC outlet (do not use a line isolation transformer during this check. Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner.
   Connect a 1000 ohm resistor between a known good earth ground, (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1000 ohm resistor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 1 volt RMS. This corresponds to 1 milliamp AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-RAY RADIATION protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified by ⚠ marks on the sehematic diagram and the replacement parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create X-RAY RADIATION. And then use specified parts only when replacing.

SERVICING PRECAUTIONS

CAUTION: Before servicing receivers covered by this service manual and its supplements and addenda, read and follow the *SAFETY PRECAUTIONS* on page 3 of this publication. *NOTE:* If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. *Remember: Safety First.*

General Servicing Precautions

1. Always unplug the receiver AC power cord from the AC power source before;
   a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
   b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
   c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.
   CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
   d. Discharging the picture tube anode.
2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc.) equipped with a suitable high voltage probe. *Do not test high voltage by "drawing an arc".*
3. Discharge the picture tube anode only by (a) first connecting one end of an insulated clip lead to the degaussing or kine aquadag grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touch the other end of the insulated clip lead to the picture tube anode button, using an insulating handle to avoid personal contact with high voltage.
4. Do *not* spray chemicals on or near this receiver or any of its assemblies.
5. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).
   CAUTION: *This is a flammable mixture.*
   Unless specified otherwise in this service manual, lubrication of contacts is not required.
6. Do *not* defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
7. Do *not* apply AC power to this receiver and/or any of its electrical assemblies unless *all* solid-state device heat sinks are correctly installed.
8. Always connect the test receiver ground lead to the receiver chassis ground *before* connecting the test receiver positive lead.
   Always remove the test receiver ground lead *last.*
9. *Use with this receiver only the test fixtures specified in this service manual.*
   CAUTION: Do *not* connect the test fixture ground strap to any heatsink in this instruments.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called *Electrostatically Sensitive (ES) Devices.* Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reducé the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a *grounded-tip* soldering iron to solder or unsolder ES devices.
4. Use only an *anti-static* type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficent to damage ES devices.
5. Do *not* use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do *not* remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature with the range of 500°F to 600°F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch, or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).
   b. Heat the component lead until the solder melts.
   c. Quickly draw the melted solder with an anti-static, suction-type solder removal device or with solder braid.
   CAUTION: Work quickly to avoid overheating the circuit board printed foil.
6. Use the following soldering technique.
   a. Allow the soldering iron tip to reach a normal temperature (500°F to 600°F).
   b Fisrt, hold the soldering iron tip and solder the strand against the component lead until the solder melts.

c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.

CAUTION: Work quickly to avoid overheating the circuit board printed foil.

d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

IC Removal/Replacement

Some chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against, the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to the areas).

"Small-Signal" Discrete Transistor Removal/ Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact then solder each connection.

Power Output Transistor Devices Removal/ Replacement

1. Heat and remove all solder from around the transistor leads.
2. Remove the heatsink mounting screw (if so equipped).
3. Carefully remove the transistor and heat sink from the circuit board.
4. Insert new transistor in circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicularly to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and if necessary, apply additional solder.

Fuse and Conventional Resistor Removal/ Replacement

1. Clip each fuse or resistor lead at top of circuit board hollow stake.
2. Securely crimp leads of replacement component around notch at stake top.
3. Solder the connections.

   CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "lift-off", the board. The following guidelines and procedures should be followed whenever this condition is encountered.

In Critical Copper Pattern Areas

High component/copper pattern density and/or special voltage current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these areas is designated as *Critical Copper Pattern* and is, identified and illustrated in this service manual in the section titled *Safety Related Copper Pattern.* (see table of conents for page number). Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your local Company Consumer Electronics Distributor Service Manager before attempting repair of Critical Copper Pattern.

At IC Connections

To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections).

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)
2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.
3. Bend a small "U" in one end of a small gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.

   CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges.

CONTROLS LOCATION

FRONT
(CBT-2172, CBT-2172E)

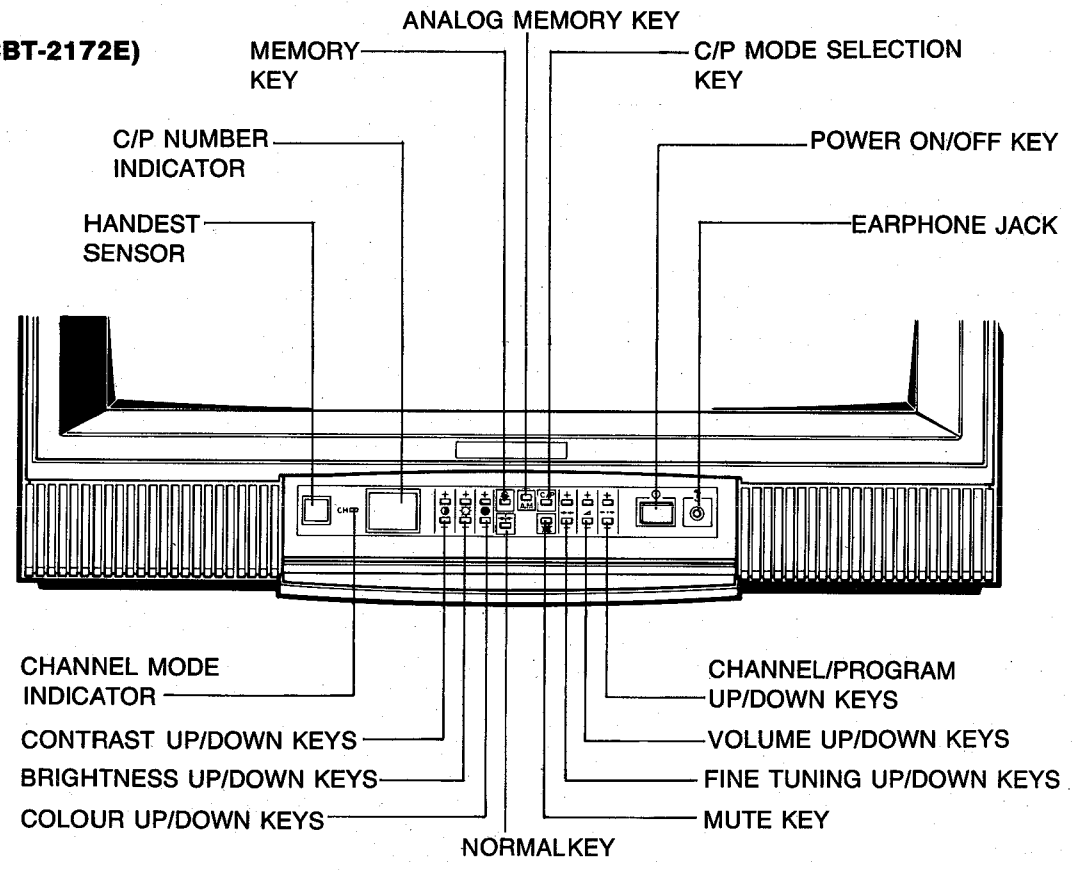


Figure 1

(CBT-2172M, CBT-2172X)

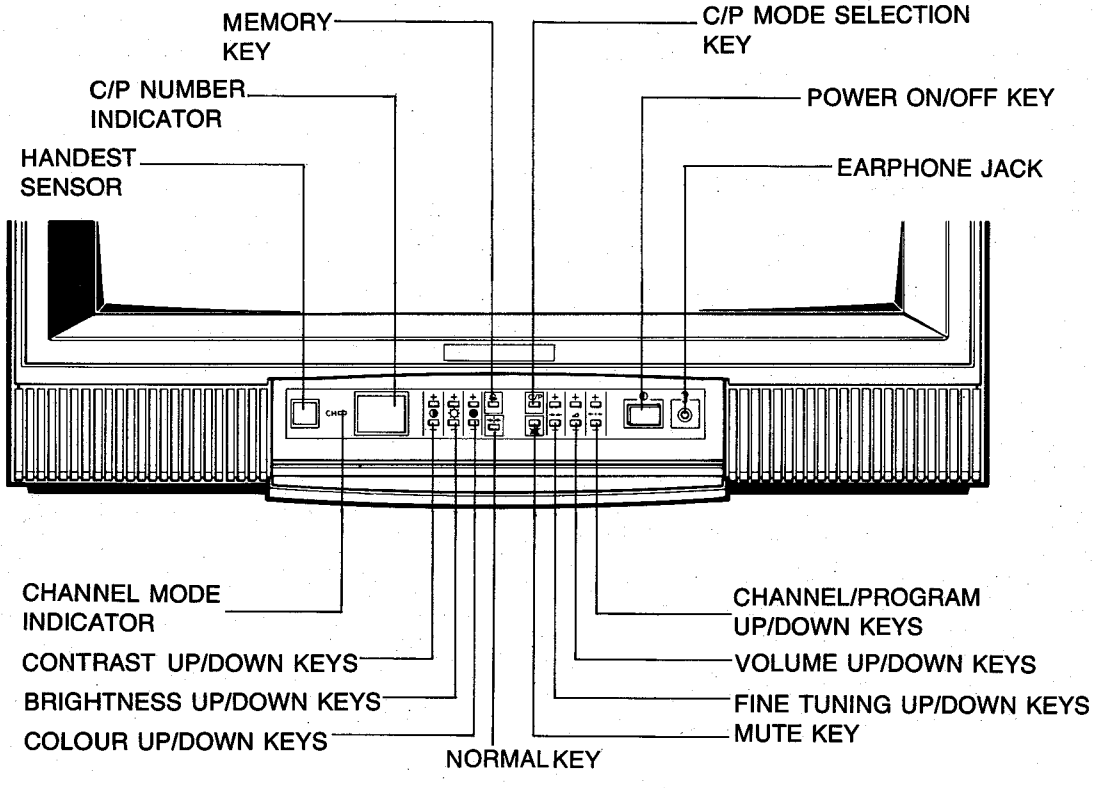


Figure 2

BACK

(4 MODELS COMMON)

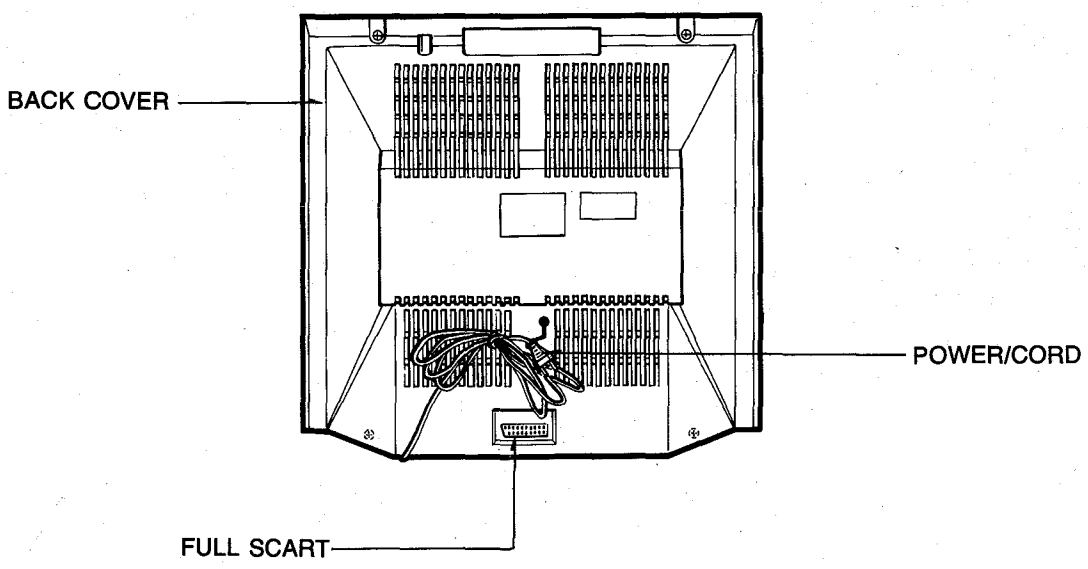


Figure 3

DISASSEMBLY INSTRUCTIONS

BACK CABINET REMOVAL

1. Remove 4 screws residing on back cabinet and carefully separate the back cabinet from the front cabinet.

MAIN CHASSIS REMOVAL

1. Grasp both sides of main chassis, pull it backward approximately 1/2".
2. Lift main chassis up, it may be removed.

SPEAKER ASS'Y REMOVAL

1. Remove P601 connector between speaker and main chassis.
2. Remove 4 screws.

TUNING ASS'Y REMOVAL

1. Remove a screw fixing on main frame.

SWITCH ASS'Y PACK REMOVAL

1. Remove 4 screws fixing.

CPT REMOVAL

1. Pull out the CPT PCB from CPT neck.
2. Place cabinet front on soft material so as not to mar the front surface and damage control knobs.
3. Remove 4 screws securing the picture tube mounting brackets to the front cabinet.
4. Carefully separate CPT from front cabinet.

PICTURE TUBE HANDLING CAUTION

Due to high vacuum and large surface area of picture tube, great care must be exercised when handling picture tube. Always lift picture tube by grasping it firmly around faceplate. NEVER LIFT TUBE BY ITS NECK. The picture tube must not be scratched or subjected, excessive pressure as fracture of glass may result in an implosion of considerable violence which can cause personal injury or property damage.

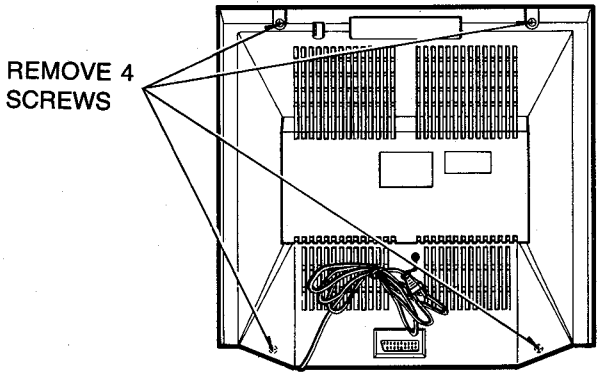


Figure 4

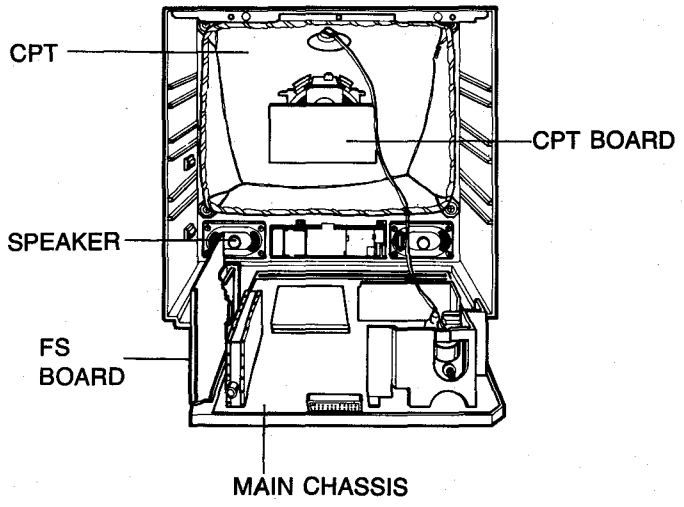


Figure 5 (CBT-2172)

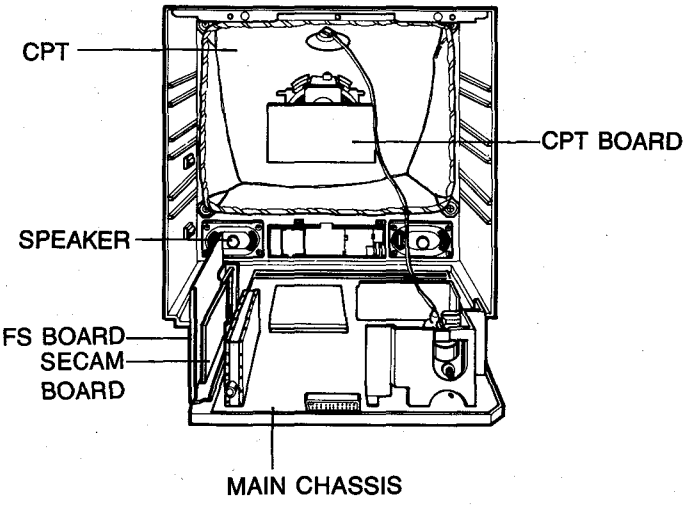


Figure 6 (CBT-2172E)

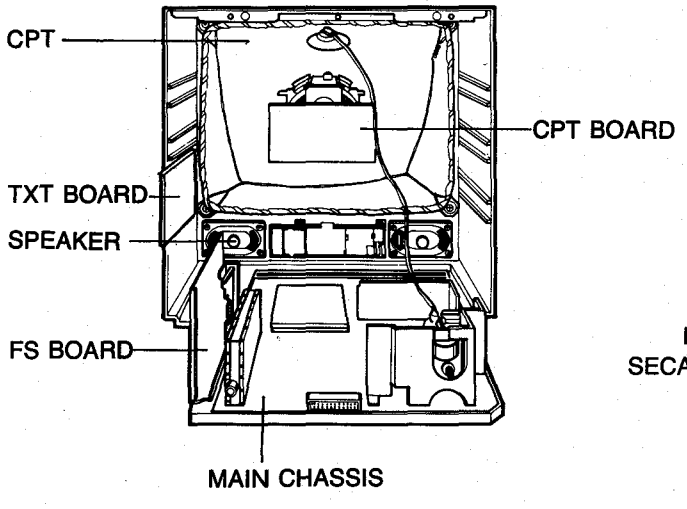


Figure 7 (CBT-2172X)

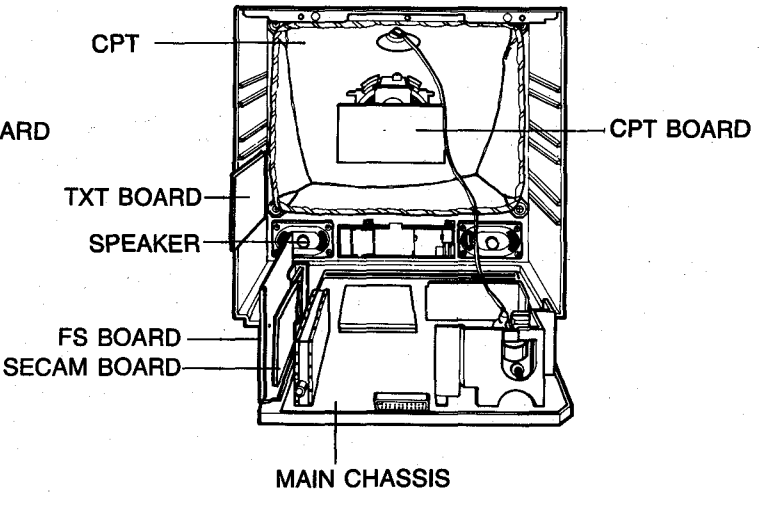
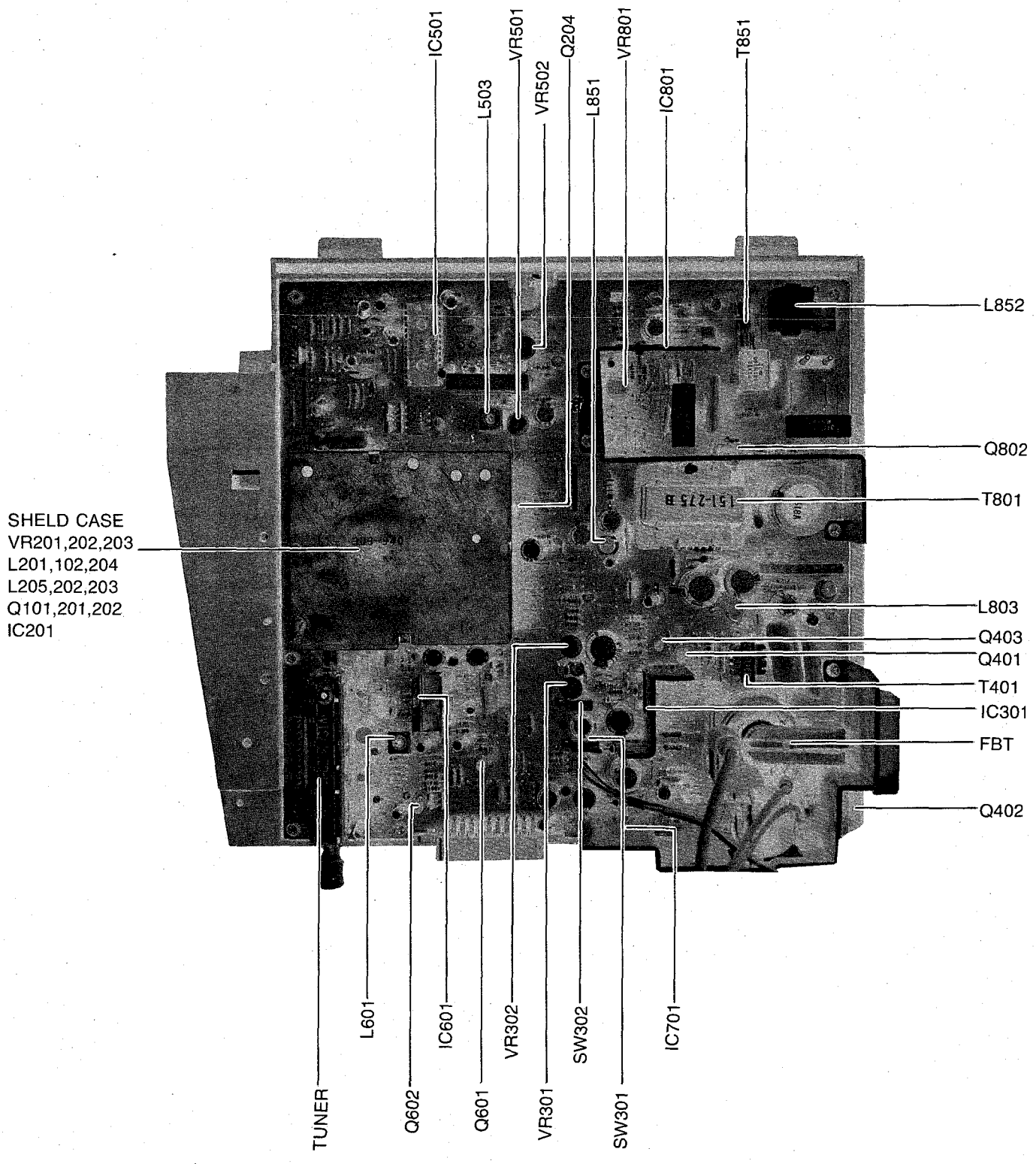


Figure 8 (CBT-2172M)

PARTS LOCATION OF MAIN CHASSIS



ADJUSTMENT INSTRUCTIONS

APPLICABILITY

This specification is applicable for all models using the PC07X2 chassis.

PREPARATION

AMBIENT CONDITION

Temperature ..... 20°C ± 5°C
Ralative Humidity ..... 65% ± 5%

EQUIPMENTS

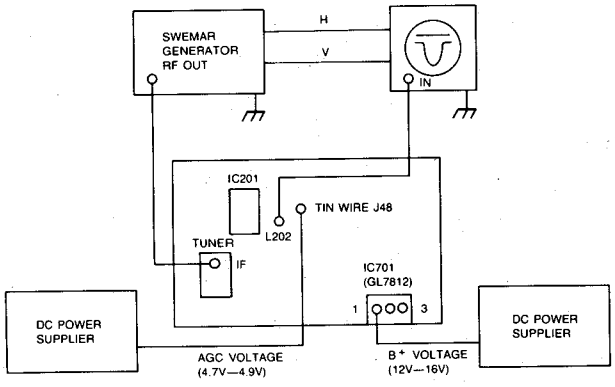
DC power supplier (0V—20V/1 Amp.) ..... 2 units
Sweep generator & marker unit
Alignment scope
DC voltmeter (High impedance)
Colour signal generator
Oscilloscope with low impedance probe

SIGNAL

GS standard colour signal, that is, the digital pattern from output of PM 5544 digital signal generator is used.

POWER SOURCE

AC 220V ± 20%, 50/60 Hz



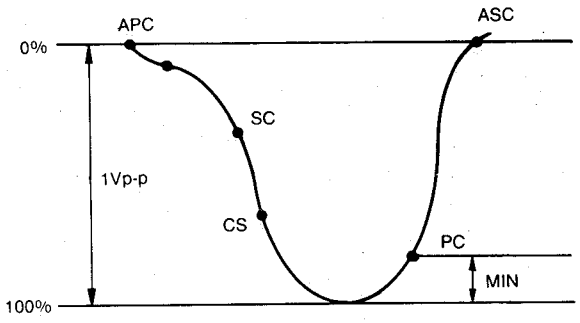
Connecting Block Diagram of Equipments

Figure 9

ADJUSTMENT PROCEDURE

VIF DETECTION COIL ADJUSTMENT

1. Connect the equipments as shown in figure 9, and then DC power suppliers on.
2. By adjusting L204 (Detection & AFC adjustment coil), make the PC (Picture Carrier) point moves down to nearly Max. position as long as the whole size of the waveform becomes not short as shown in figure 10.



PC: Picture Carrier APC: Adjacent PC
CS: Colour Subcarrier ASC: Adjacent SC
SC: Sound Carrier

Figure 10. VIF Characteristic Waveform

ASC TRAP (40.4 MHz) COIL ADJUSTMENT

1. This adjustment procedure must be applicable for all models of using ASC trap coil (L102) and is carried out before VIF adjustment.
2. Connecting method of equipments is the same as figure 9.
3. Adjusting method is also the same as VIF adjustment, but it is needed to increase AGC voltage and if input level 10% up so that ASC trap point (40.4 MHz) level is exhibited exactly on the alignment scope.
4. After turing the core of L102 fully counter-clockiwise, then by turning it clockwise, make the 40.4 MHz point moves up to nearly Min. position.

MAIN B+ (120V DC)

1. Operate the receiver normally.
2. Apply the standard colour signal to the RF input of tuner.
3. By adjusting VR801, make the voltage at TP7 to be 120 ± 0.2V DC.

HORIZONTAL OSCILLATION

1. Apply the standard colour signal to the RF input of tuner.
2. Connect TP6 (Sync. seperator input) to the secondary ground of chassis.
3. Adjust VR202, for best possible floating sync. condition (disconnect link).

NOTE: This adjustment must be performed after disconnecting P102 on Main Board.

HORIZONTAL CENTER (H-SHIFT)

1. Apply the standard colour signal to the RF input of tuner.
2. By adjusting VR203, make the picture locate at geometrical horizontal center.

VERTICAL HEIGHT & LINEARITY

1. Apply the standard colour signal to the RF input of tuner.
2. By using VR301, adjust the upper & lower parts of outer side of the effective picture shows below 5mm under the condition of brightness min. position.
3. By adjusting VR302, make the length of uppper & lower radius on vertical direction of the circle to be equal.

VERTICAL CENTER

By using SW301, adjust vertical center of the signal pattern to correspond with the geometric center of CRT.

SIF (SOUND INTERMEDIATE FREQUENCY)

In case of using SIF adjusting unit.

1. Apply Vcc (19V) to the pin 18 of the IC601 with the ground pin 5, 6, 15, 16.
2. Apply the output signal of SIF adjustment unit to the pin 1 of the Z601.
3. Connect the alignment input to the pin 10 of IC601.
4. Adjust L601 so that the sound carrier of each correspondent broadcasting system to be on the center line.
   Ref) B/G: 5.5, I: 6.0, D/K: 6.5 N: 4.5

In case of using oscilloscope

1. Apply the standard colour signal included 1 KHz sound signal to the RF input of tuner.
2. Connect oscilloscope to the TP8 (sound output) with sound ground. (The Pin 5, 6, 15, 16 of IC601)
3 Adjust L601 so that the amplitude of S-OUT may to be max.

COLOUR SYNCHRONIZATION

1. Apply the standard colour signal to the RF input of tuner.
2. Set Contrast, Brightness, and Colour control volume to max. position
3. Connect colour saturation terminal (TP1) to the B+ (12V, TP2).
4. Connect pin 21 (B-Y input, TP3) and pin 22 (R-Y input, TP4) of the IC501 each other.
5. Adjust VR502 so that colour is locked.
6. Remove the connection as paragraphs 3, 4.

PAL MATRIX

1. Set Contrast, Brightness, and Colour control volume to max. position.
2. Apply the standard colour signal to the RF input of tuner.
3. Connect the oscilloscope to the pin 12 & pin 16 of IC501 and set the oscilloscope function to X-Y mode.
4. Adjusting VR501 and L503, make dots in figure 11 come together at one point as shown in figure 12.

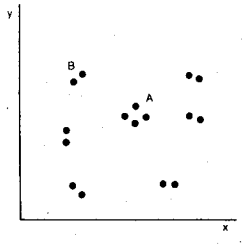


Figure 11

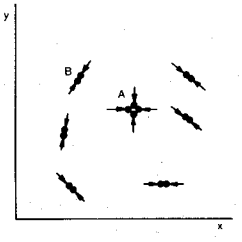


Figure 12

First, adjusting VR501, make dots of "A" overlapped and then by adjusting L503, make dots of B come together at one point.

RF AGC

1. Apply the standard colour signal (70 dB ± 1 dB) to the RF input of tuner.
2. Connect the digital multimeter to the RF AGC output terminal (TP5).
3. Adjusting VR201, make the voltage of TP5 be 5.5 ± 0.1V DC.

SCREEN & WHITE BALANCE

1. Set Colour, Brightness, Contrast volume to min. position.
2. Set the bias adjustment volume (VR901—903) on CPT board to min. position and the drive adjustment volume (VR904, 905) to center position.
3. Apply the standard colour signal to the RF input of tuner.
4. Place the receiver into a service position by shifting SW302 left or right.
   Then by adjust bias volume (VR901-903), for a white line.
5. By adjusting the screen volume of FBT, until the white line is just visible.
6. Reset the position of SW302 to center position.
   Then after setting brightness, contrast volume to max. position, adjust white balance with the drive adjustment volume (VR904, 905).
7. Check the white balance under the condition of low and high light.
   If the white balance is not correct, perform as paragraph 1 through 7 again.

SECAM BOARD

NOTE: This adjustment is only applicable for secam system.

SECAM BELL FILTER

1. Apply the standard secam colour bar signal to the VIDEO input (FBS of SP01) on secam board.
2. Connect the oscilloscope with low capatance probe (FET probe) to pin 3 (STP 2) of SIC 1.
3. Adjust SL01 so that the size of waveform can be max. value and flat.
4. In case of not using FET probe, after perform paragraph 1) through 3), by adjusting the SL01, make the AREA of 3.8 MHz be red and the shadow on Magenta colour AREA beside black level bar at center of the pattern almost not be visible.

SECAM REFERENCE COIL

1. Connect the probe of oscilloscope to the pin 9 (STP03) of SIC1.
2. Adjust SL04 and SVR2 so that the modulated signal of R-Y & B-Y line can be Min. size as shown in figure 13.

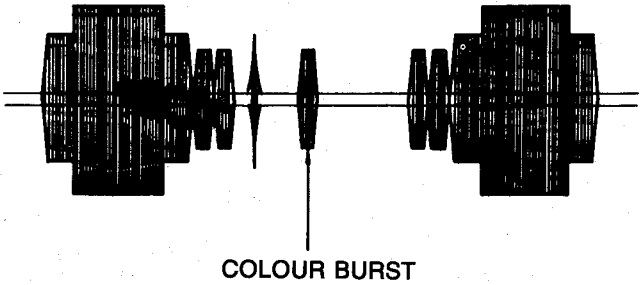


Figure 13

SECAM COLOUR SYNCHRONIZATION (4.43 OSC.)

1. After connecting secam board to PAL decoder, perform this adjustment. And must be performed after finishing the adjustment of PAL decoder colour Sync.
2. Perform as paragraphs 2, 3, 4, of PAL colour synchronization adjustment.
3. Adjust SVC1 (Trimmer Capacitor) so that the colour bar dosen't flow down.
4. Remove the connection done as paragraph 2 of this section.

1H-DELAY LINE

1. Apply the secam colour bar signal (Signal level 1Vp-p, B-Y is modulated, R-Y is OFF) to the video input (FSB of SP01) on secam board.
2. Connect the probe of oscilloscope to TP3 (Pin 21 of IC501: B-Y input) on main board.
3. Adjust SL03 and SVR1 so that the B-Y signal can be max. size, the R-Y signal, min. size.

In case that there can not prepare the equipment which generate the signal in paragraph 1 of this section, adjust as follows.

1. Apply the standard secam colour signal to the RF input of tuner.
2. Connect probe of oscilloscope to alternating lead of C504 on main board.
3. Adjusting SVR1, make A and B to be overlapped and adjusting SL03 make Height of colour burst and and c to be almost equal as shown in Figure 14.

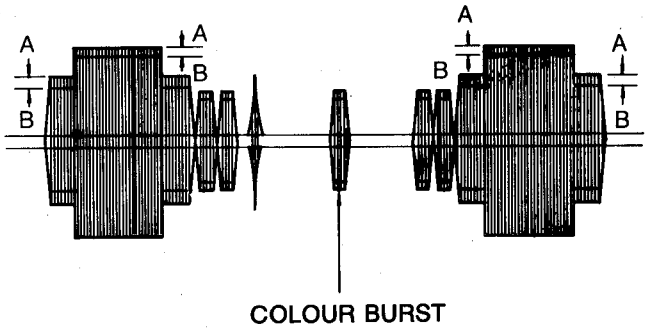


Figure 14

APC (COLOURLESS PATTERN ADJUSTMENT)

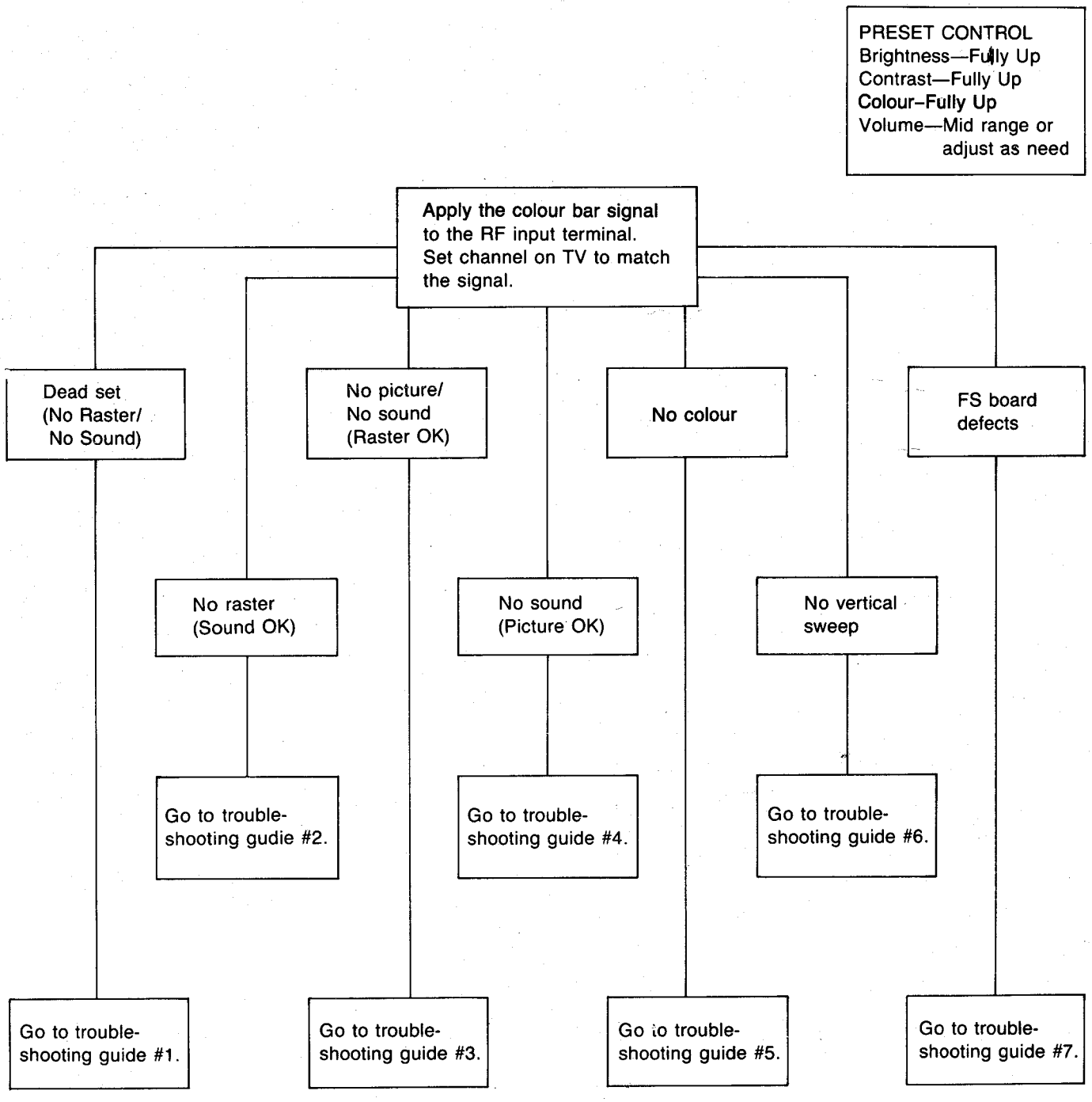
After all applicable adjustment of chassis is finished, this adjustment is performed with the naked eye in DEM. pattern.

1. Apply the DEM. pattern signal to the RF input of tuner.
2. Set Colour & Contrast to be max. and Brightness min.
3. By adjusting VR502, make the third & fourth colour of DEM. pattern not to be distinctive.

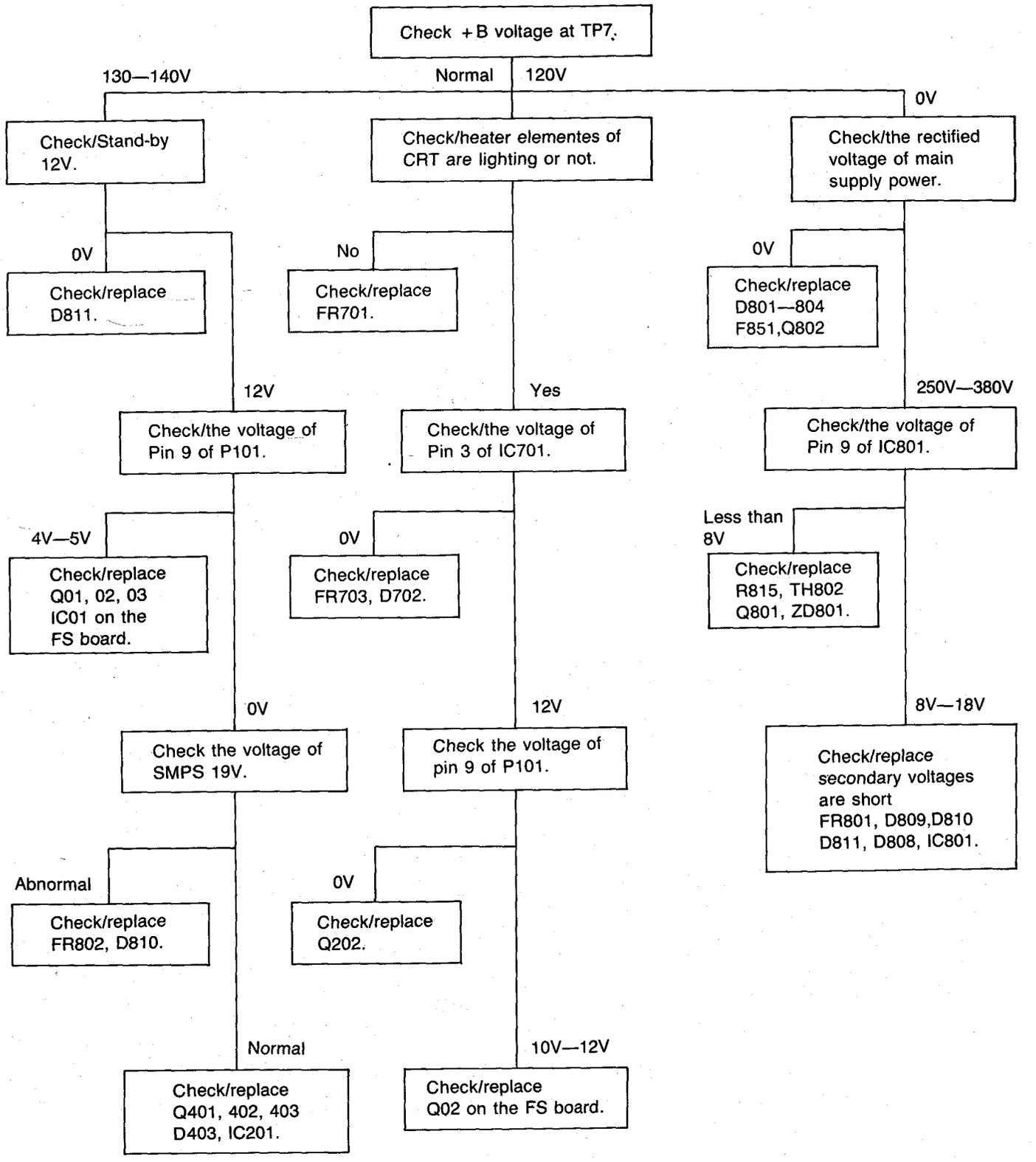
TXT BOARD ADJUSTMENT

1. Apply the signal with Teletext.
2. Connect the probe of Frequency Counter to TP1.
3. Connect the terminal TP2 and TP3.
4. By adjusting Trimmer capacitor (XVC1), make the frequency of TP1 be 6000.1 $^{+0.05}_{-0.1}$ KHz.

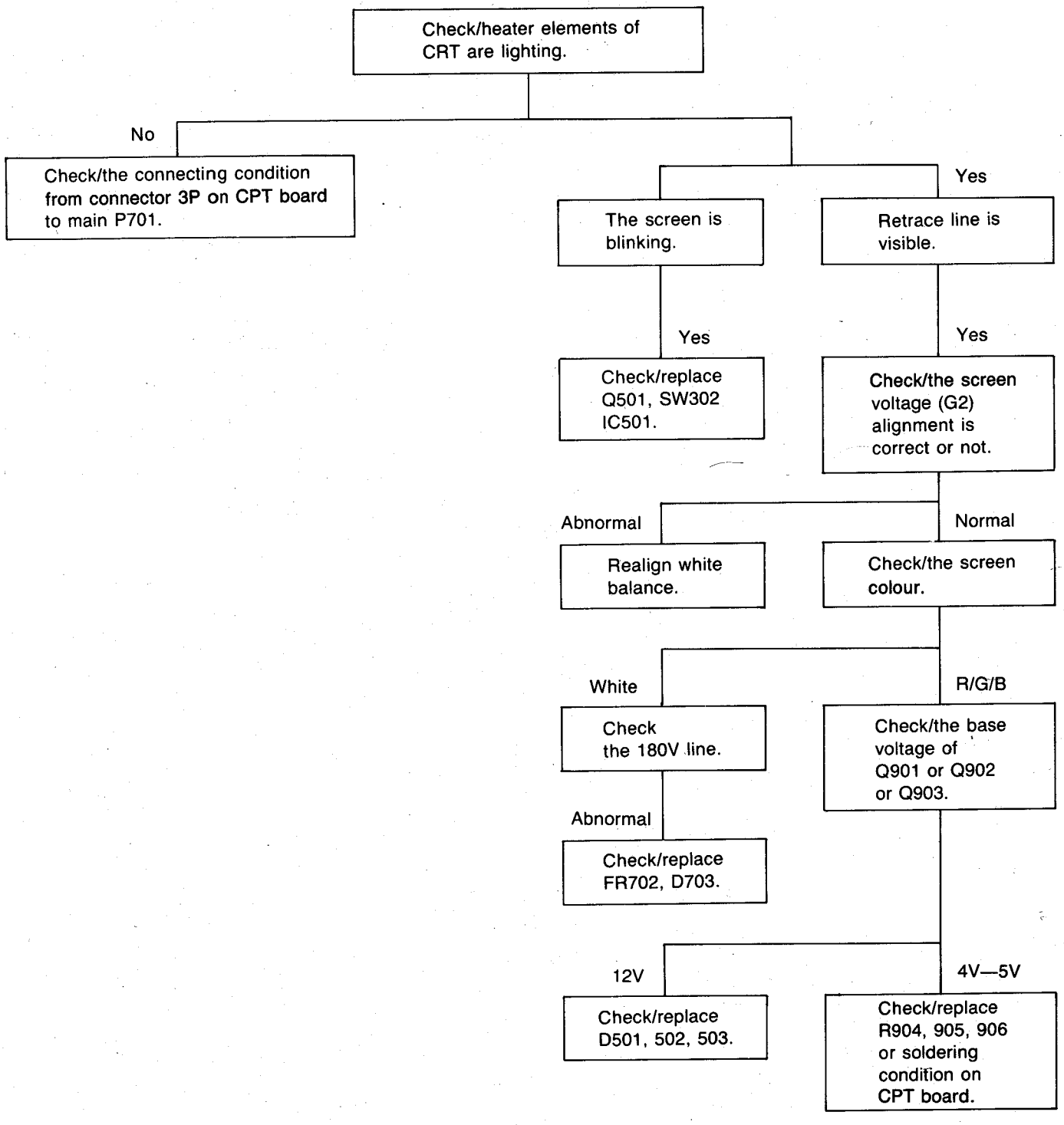
TROUBLESHOOTING GUIDE


PRESET CONTROL
Brightness—Fully Up
Contrast—Fully Up
Colour–Fully Up
Volume—Mid range or adjust as need
Apply the colour bar signal to the RF input terminal. Set channel on TV to match the signal.
Dead set (No Raster/ No Sound)
No picture/ No sound (Raster OK)
No colour
FS board defects
No raster (Sound OK)
No sound (Picture OK)
No vertical sweep
Go to trouble-shooting gudie #2.
Go to trouble-shooting guide #4.
Go to trouble-shooting guide #6.
Go to trouble-shooting guide #1.
Go to trouble-shooting guide #3.
Go to trouble-shooting guide #5.
Go to trouble-shooting guide #7.

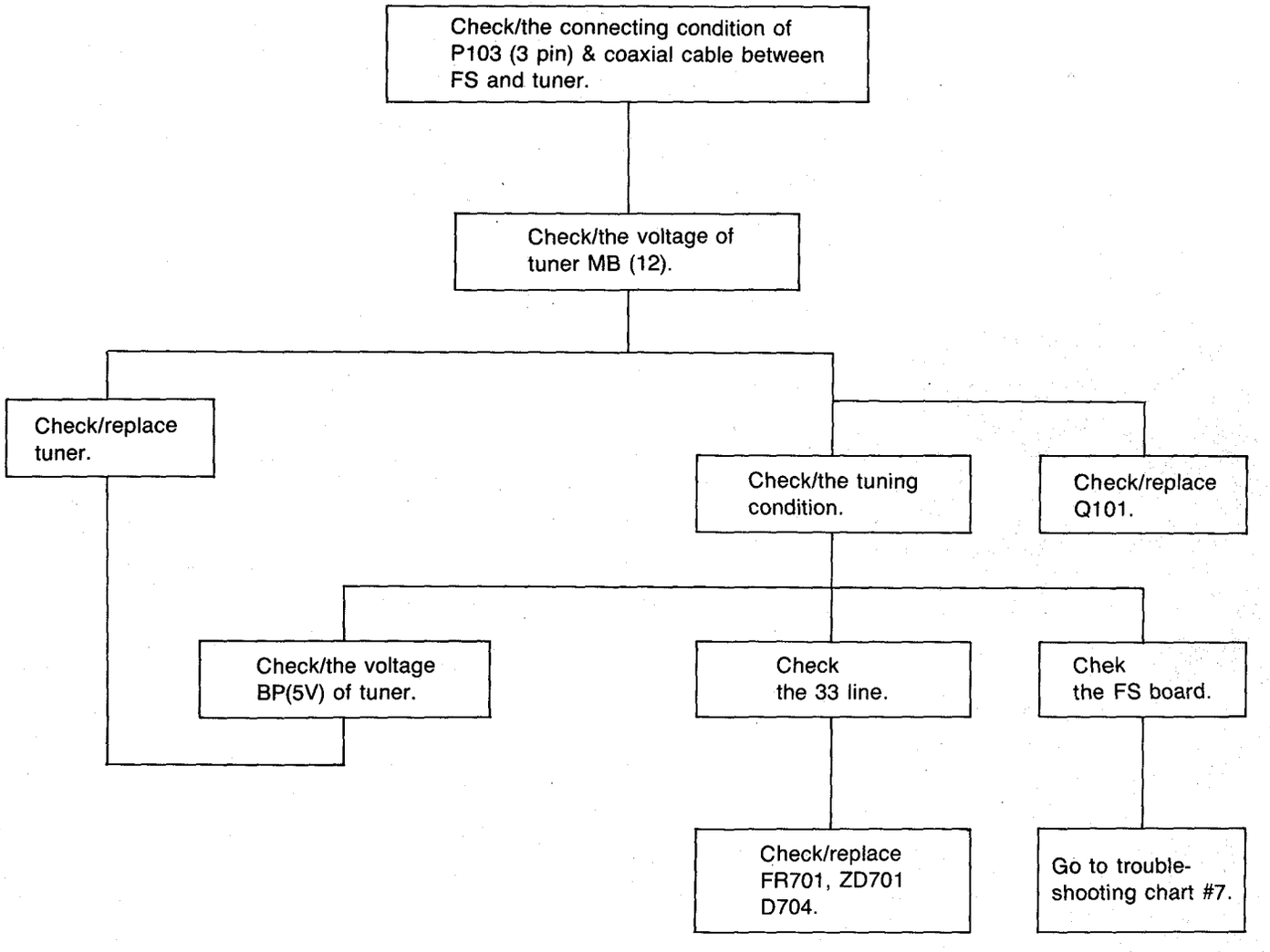
1. DEAD SET (NO RASTER/NO SOUND)



2. NO RASTER (SOUND OK)

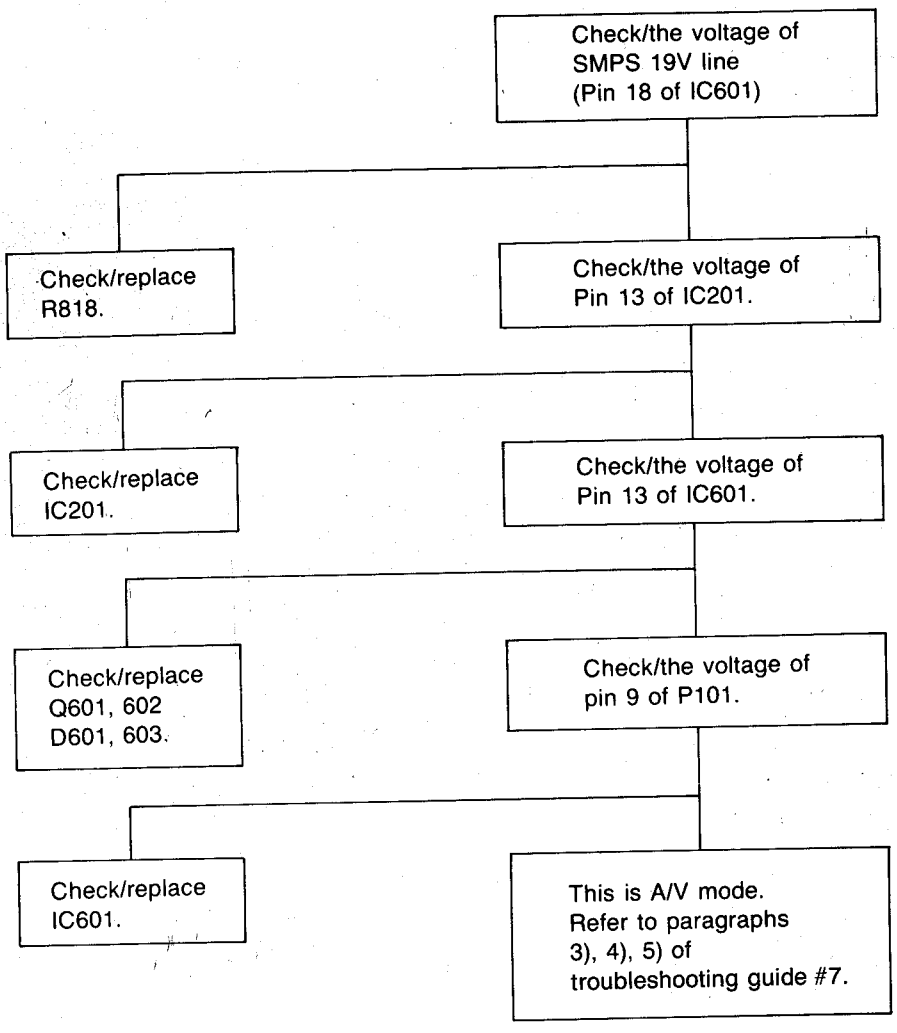


3. NO PICTURE/NO SOUND (RASTER OK)

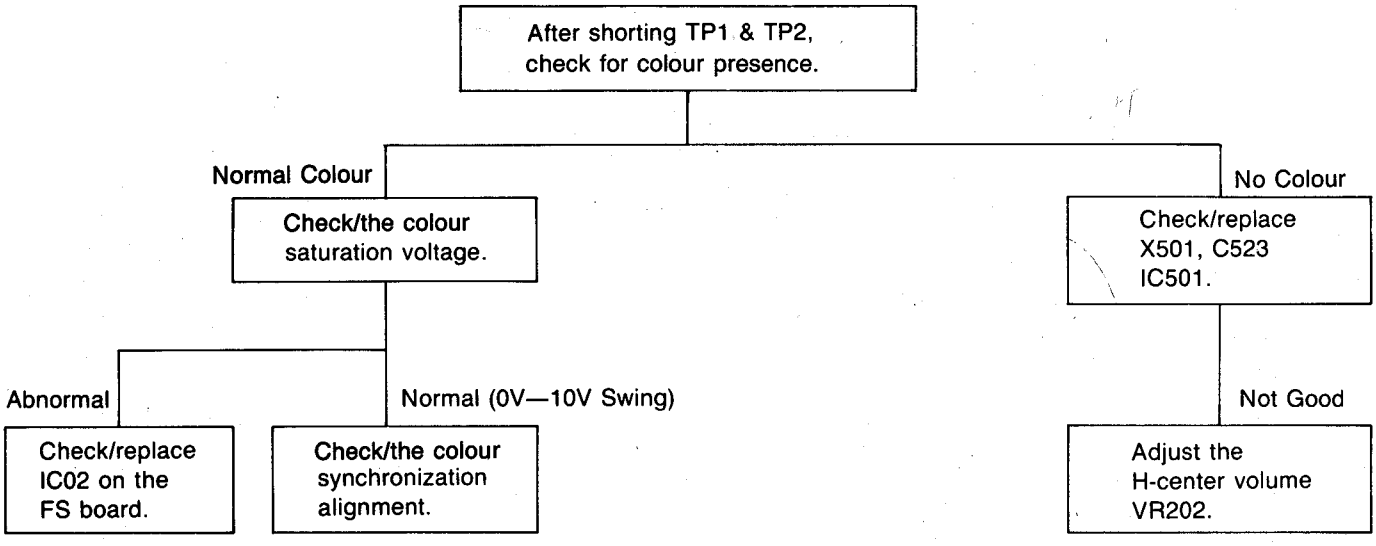

Check/the connecting condition of P103 (3 pin) & coaxial cable between FS and tuner.
Check/the voltage of tuner MB (12).
Check/replace tuner.
Check/the tuning condition.
Check/replace Q101.
Check/the voltage BP(5V) of tuner.
Check the 33 line.
Chek the FS board.
Check/replace FR701, ZD701 D704.
Go to trouble-shooting chart #7.

4. NO SOUND (PICTURE OK)

Note:
Sound is muted whenever the screen is noise condition, that is, broadcasting signal is not found


Check/the voltage of SMPS 19V line (Pin 18 of IC601)
Check/replace R818.
Check/the voltage of Pin 13 of IC201.
Check/replace IC201.
Check/the voltage of Pin 13 of IC601.
Check/replace Q601, 602 D601, 603.
Check/the voltage of pin 9 of P101.
Check/replace IC601.
This is A/V mode. Refer to paragraphs 3), 4), 5) of troubleshooting guide #7.

5. NO COLOUR

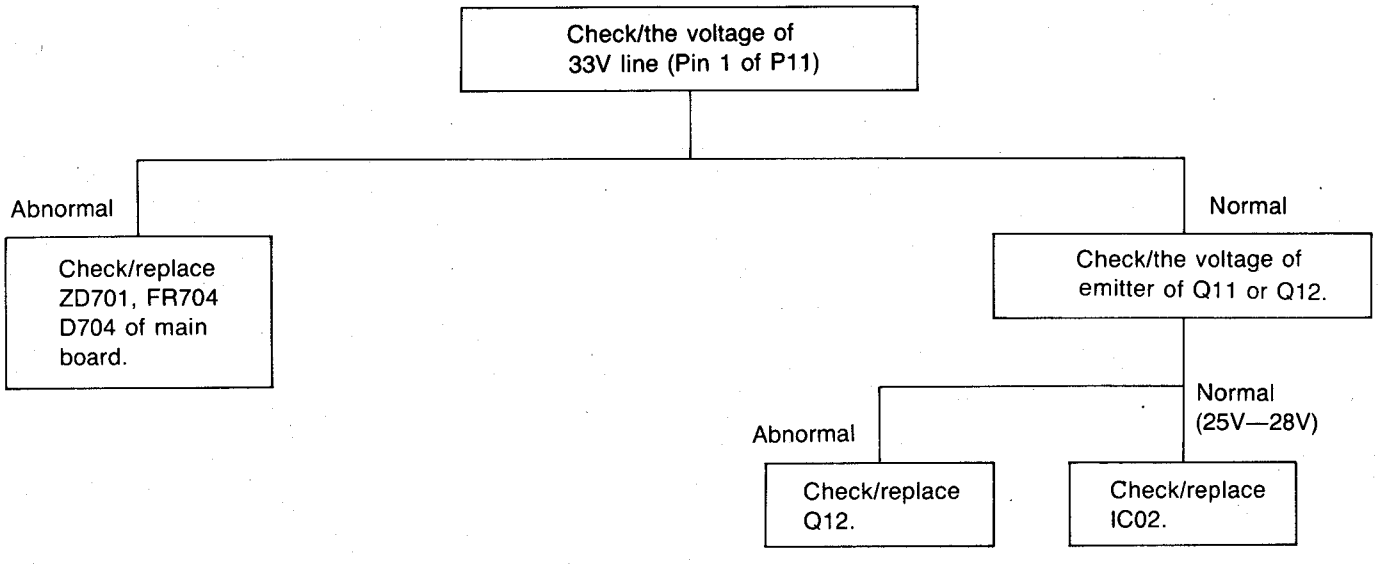


6. NO VERTICAL SWEEP

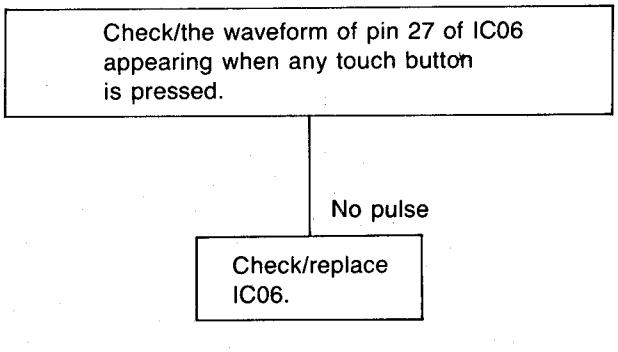
Check/the position of SVC switch (SW302).
It must be at center.

7. FS BOARD DEFECTS

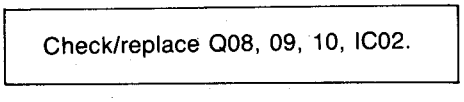
1) Memory Defect



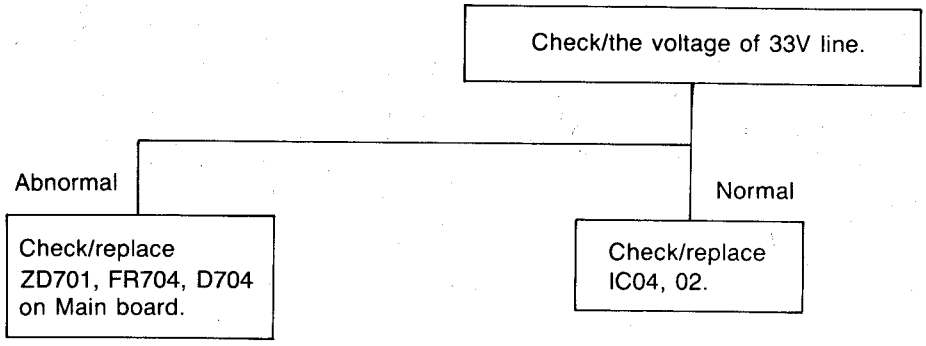
2) Touch Board Defect
(Transmitter operation is OK)



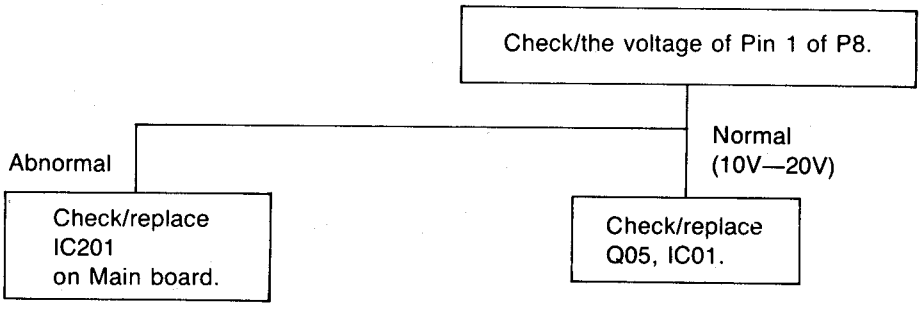
3) Tuning band Selection Defect



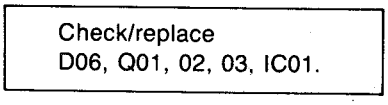
4) Tuning Voltage Chart



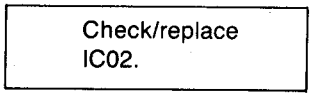
5) Search Function Defect



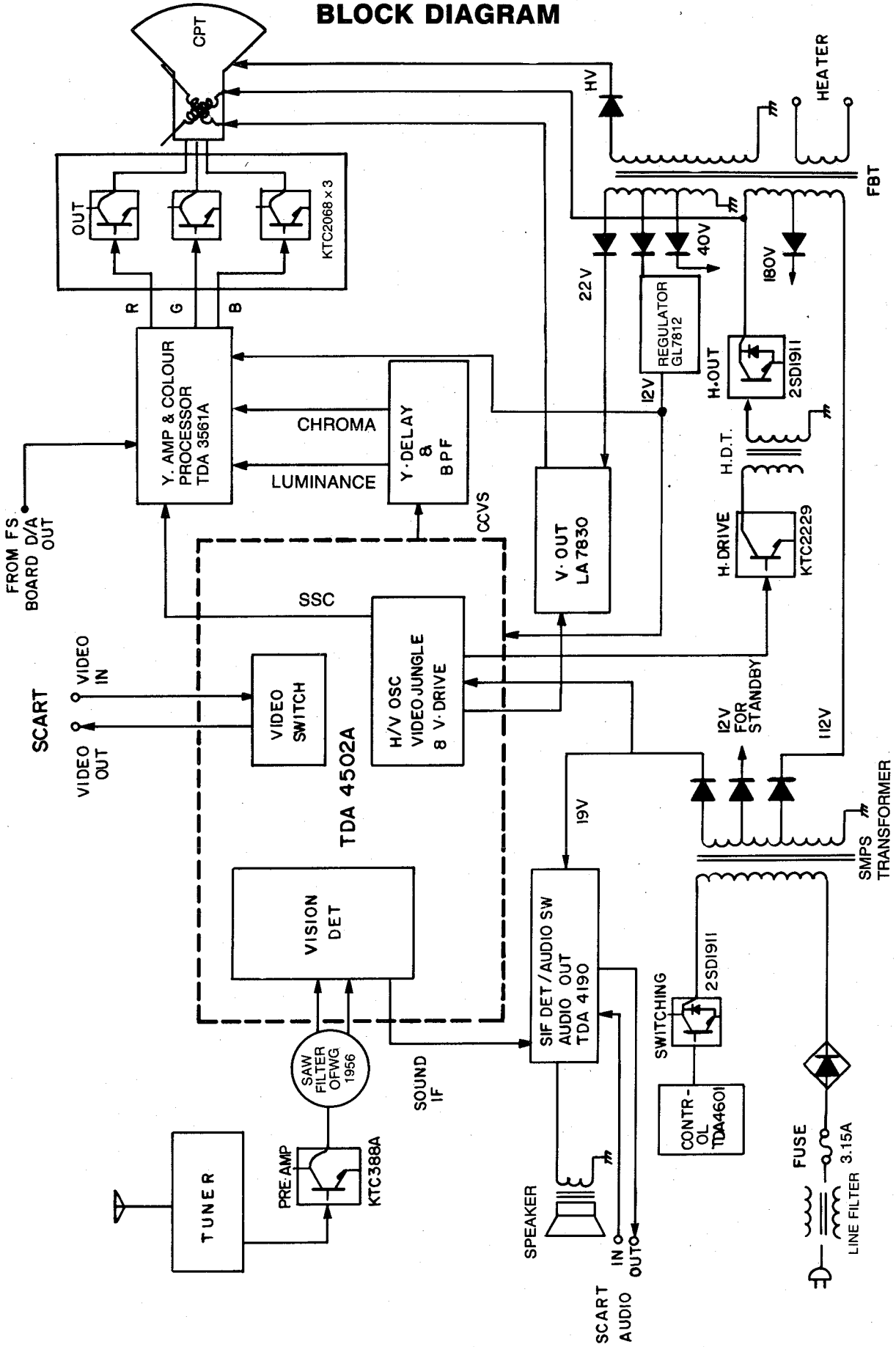
6) Set ON/OFF Defect
(Stand-by Function Defect)



7) Analog Control Defect
(Colour, Contrast, Brightness, Volume Controls)

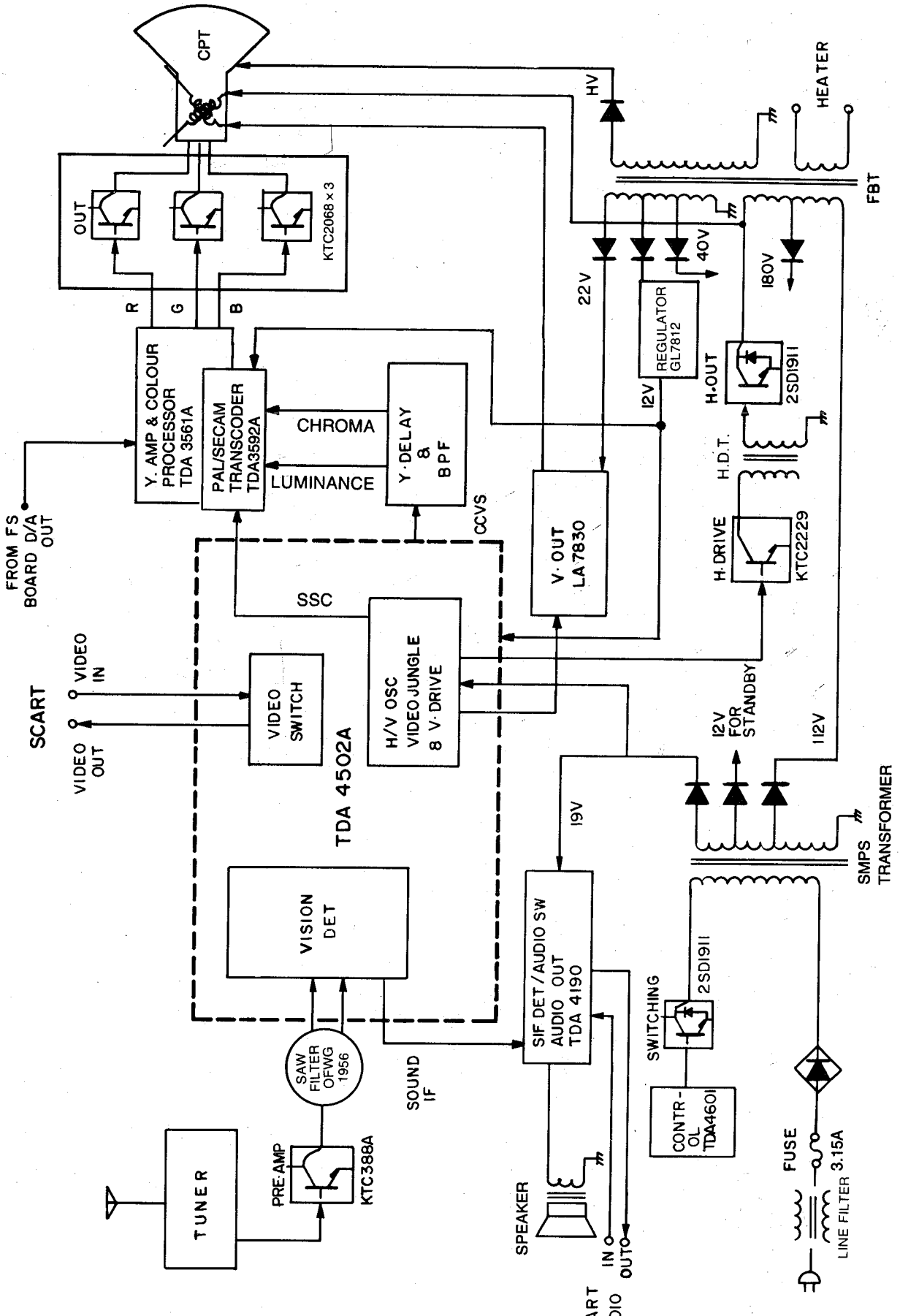


BLOCK DIAGRAM

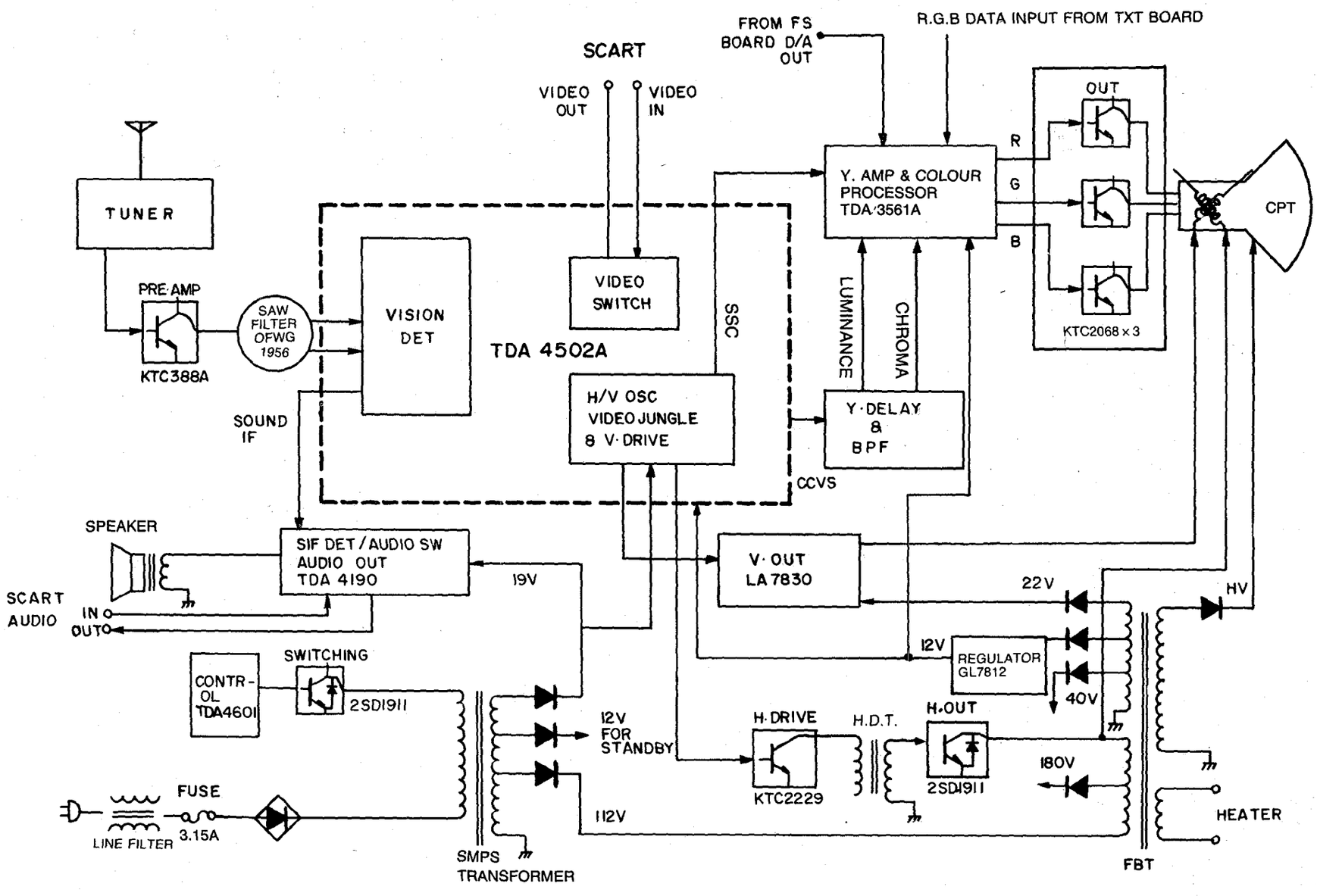


MAIN BOARD (CBT-2172)

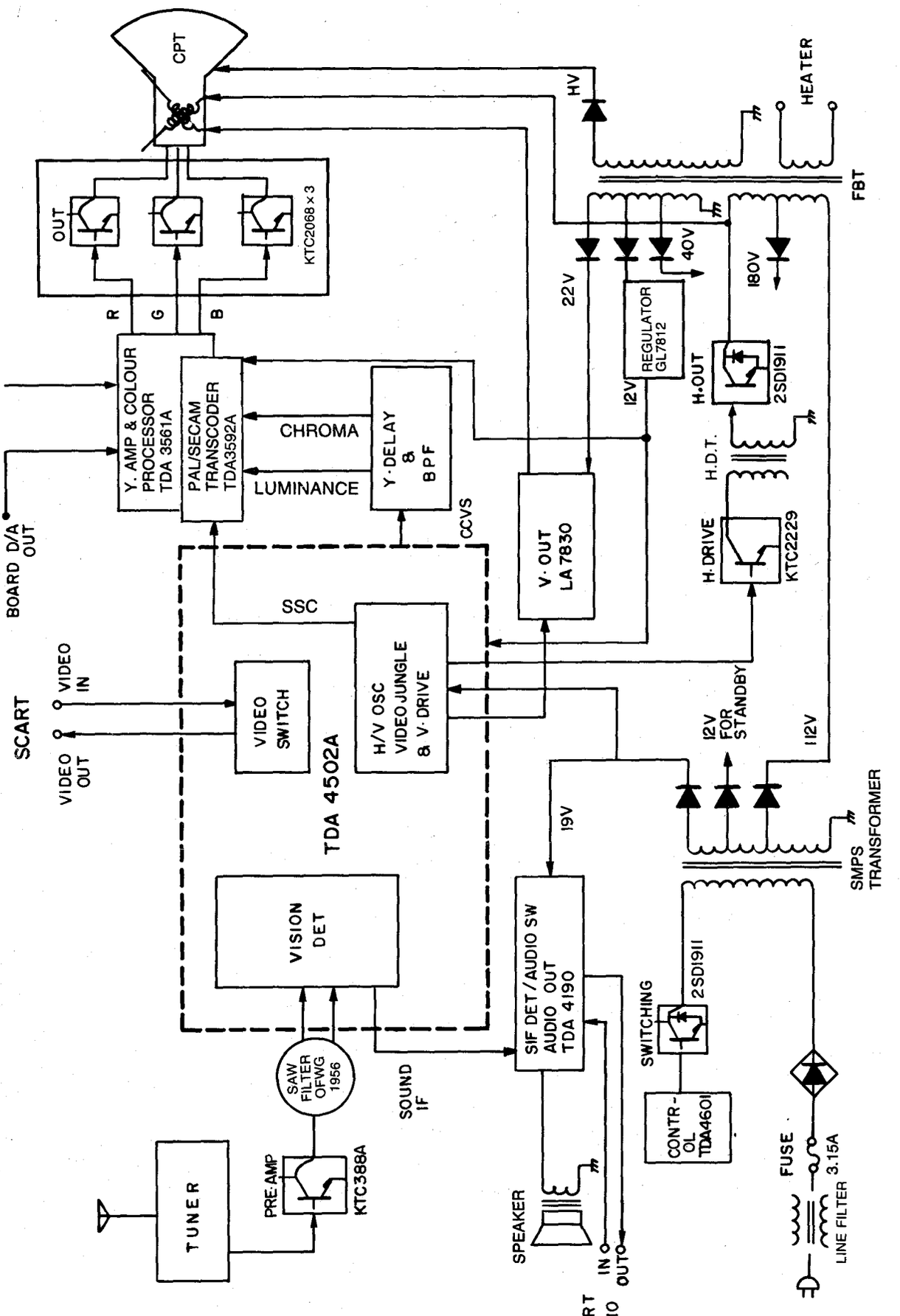
MAIN BOARD (CBT-2172E)



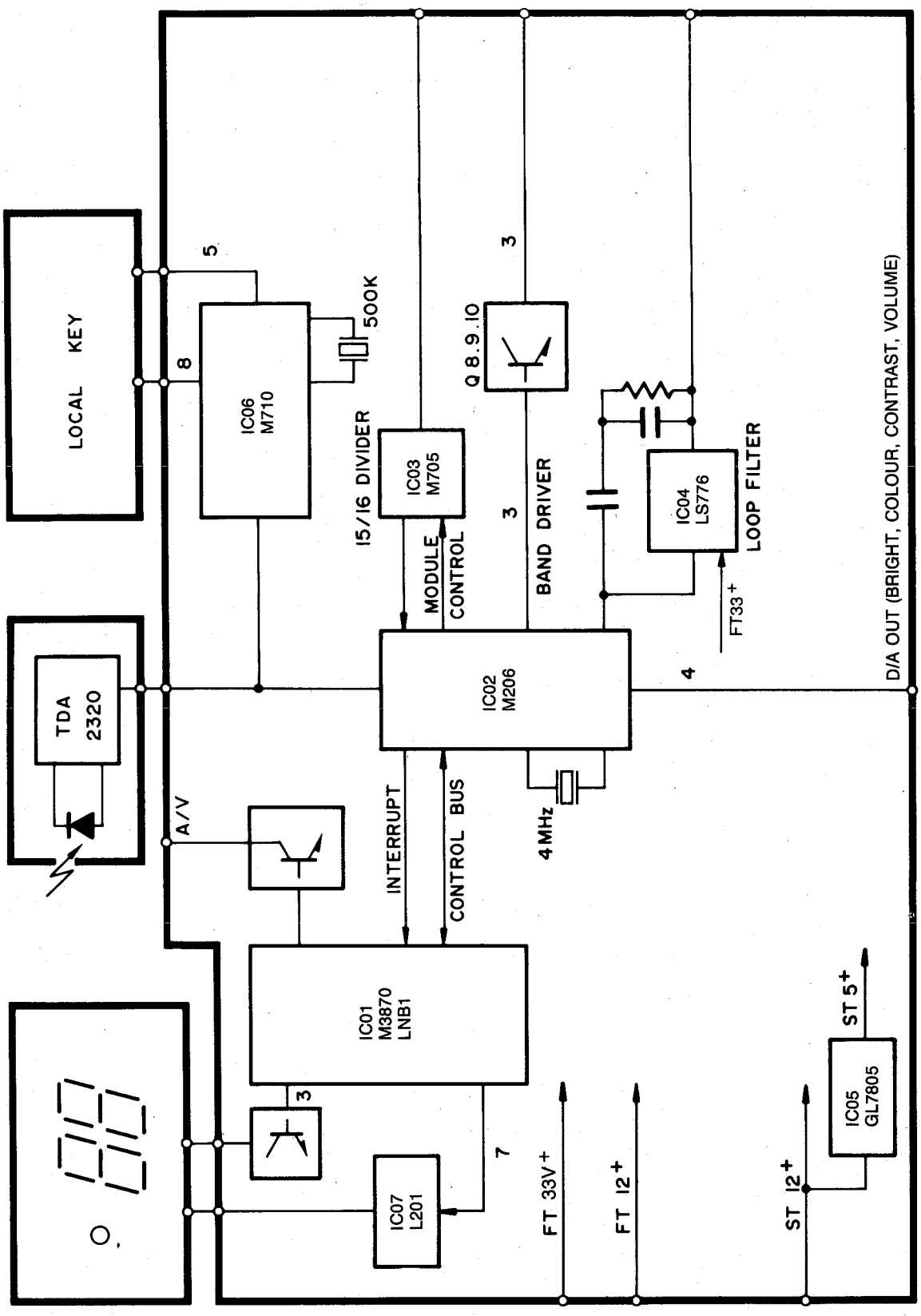
MAIN BOARD (CBT-2172X)



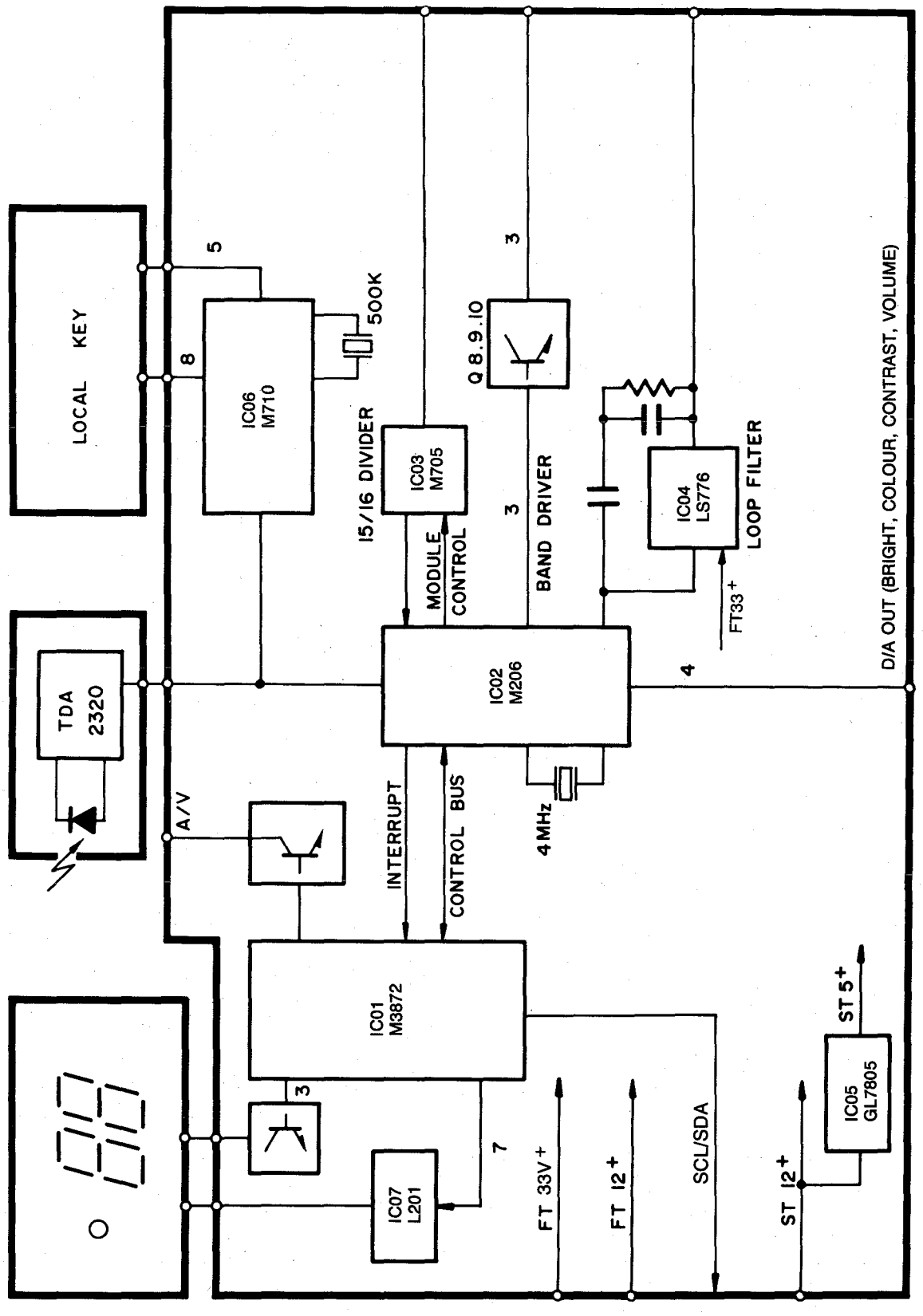
MAIN BOARD (CBT-2172M)



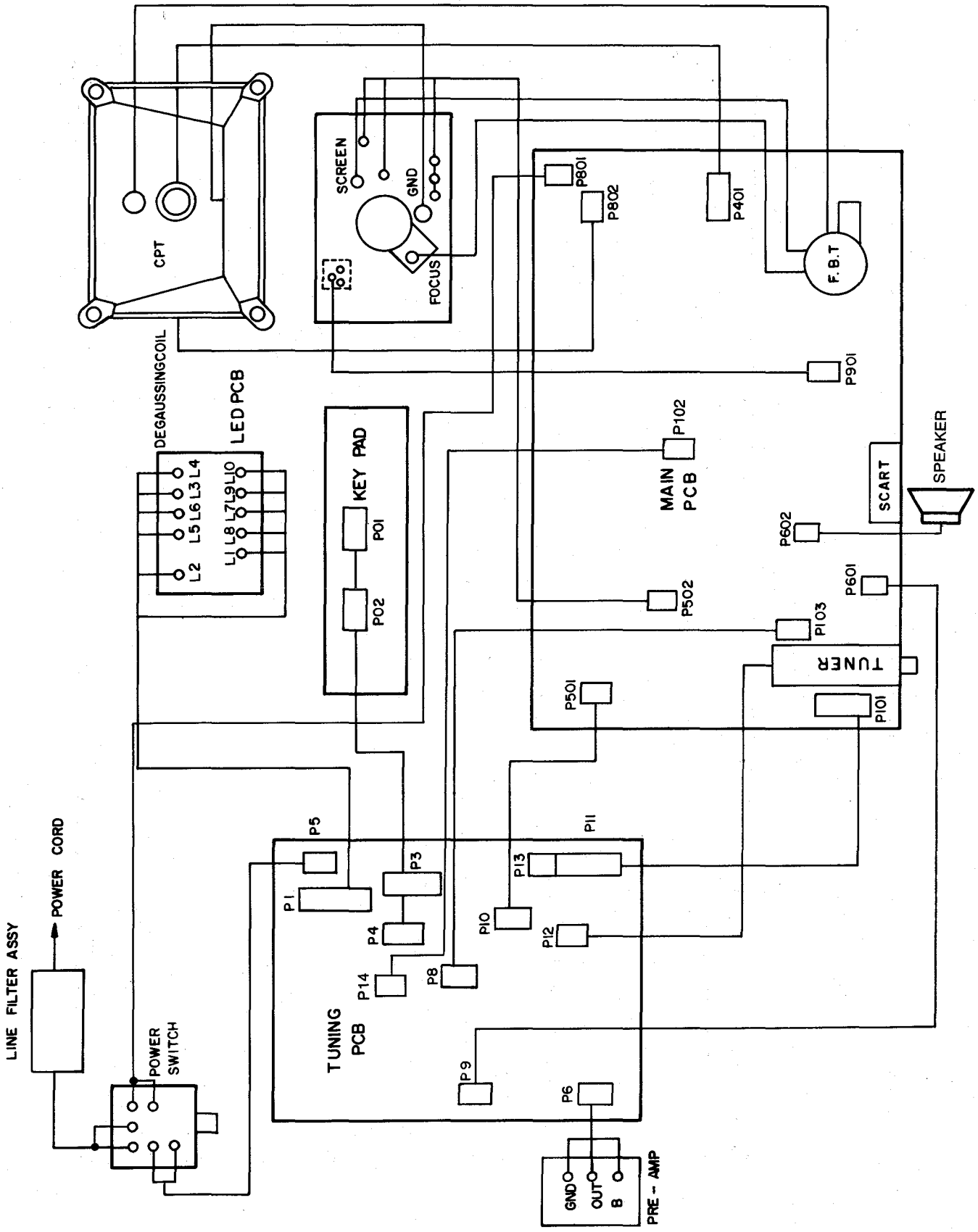
FS TUNING BOARD (CBT-2172, CBT-2172E)



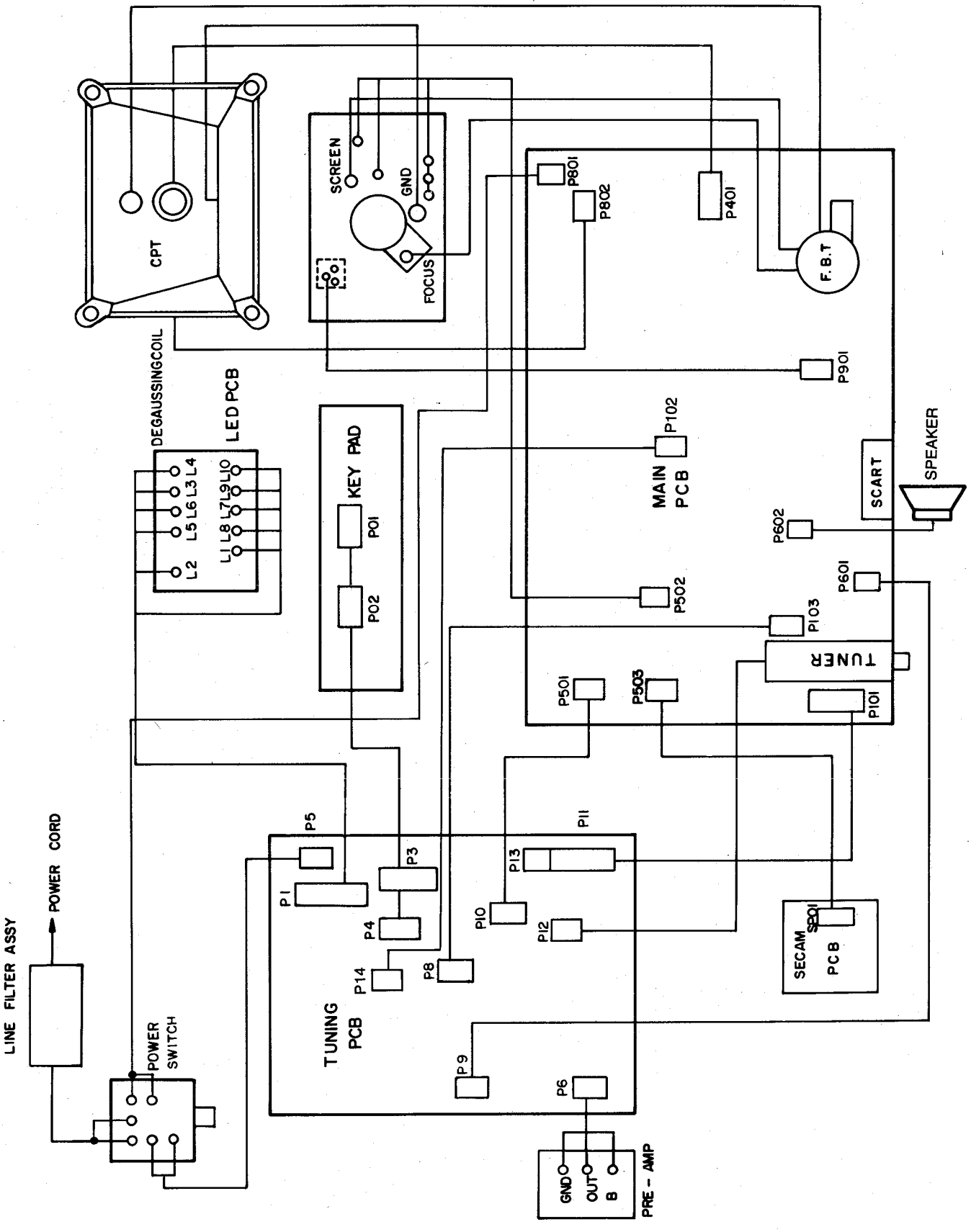
FS TUNING BOARD (CBT-2172X, CBT-2172M)



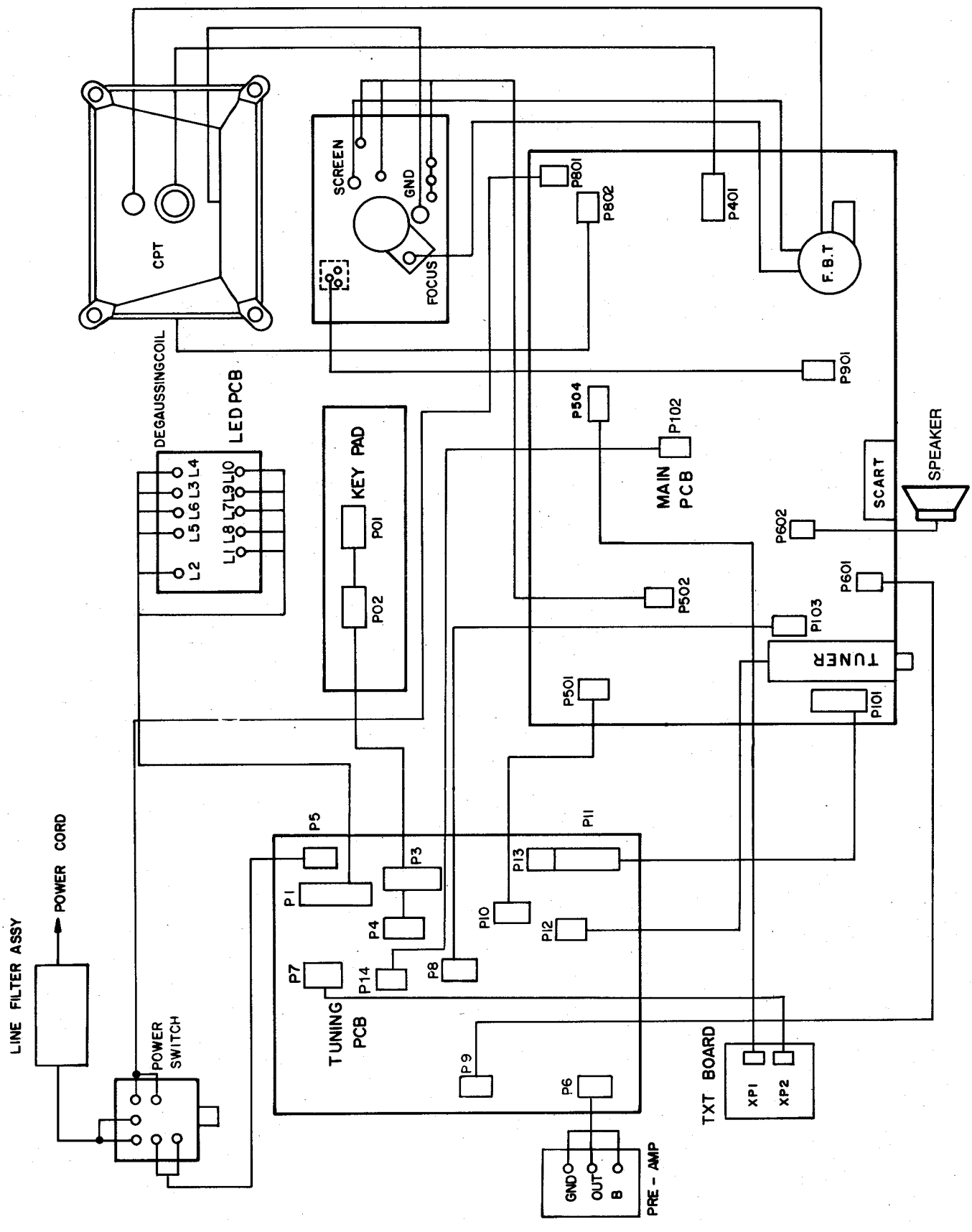
WIRING DIAGRAM (CBT-2172)



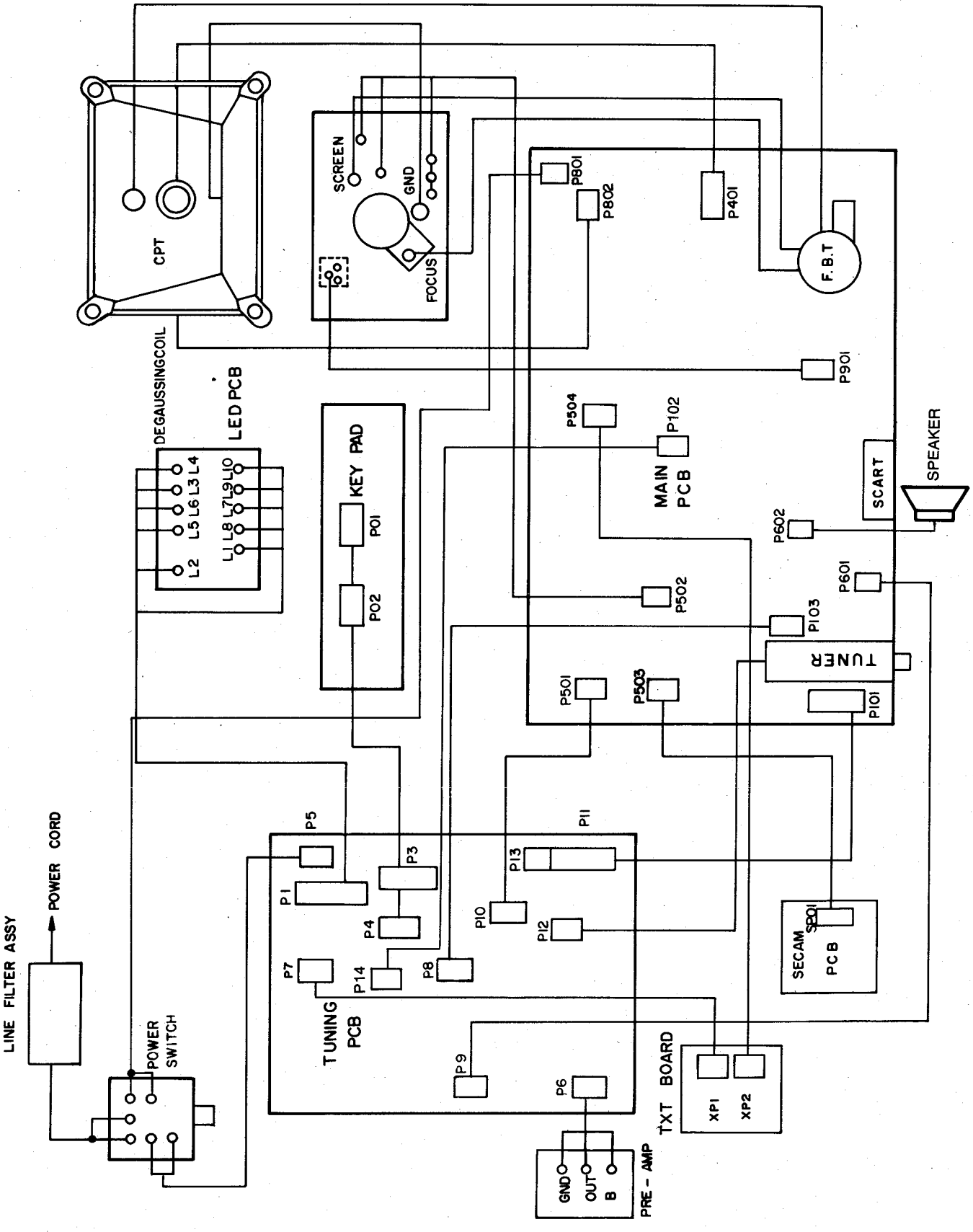
(CBT-2172E)


CPT
SCREEN
GND
FOCUS
P801
P802
P401
F.B.T
P901
DEGAUSSINGCOIL
LED PCB
L1 L8 L7 L9 L10
L2 L5 L6 L3 L4
KEY PAD
P01
P02
P102
MAIN PCB
P502
SCART
SPEAKER
P602
P601
P103
TUNER
P101
P501
P503
P5
P11
P3
P13
P1
P4
P10
P12
P14
P8
TUNING PCB
P9
P6
SECAM PCB
S201
POWER CORD
LINE FILTER ASSY
POWER SWITCH
GND
OUT
B
PRE - AMP

(CBT-2172X)


CPT
SCREEN
GND
FOCUS
P801
P802
P401
F.B.T
P901
DEGAUSSINGCOIL
LED PCB
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10
KEY PAD
P01
P02
P504
P102
MAIN PCB
SCART
SPEAKER
P602
P601
P502
P103
TUNER
P101
P501
P5
P1
P3
P4
P11
P13
P10
P12
P7
P14
P8
TUNING PCB
P9
P6
TXT BOARD
XP1
XP2
GND
OUT
B
PRE - AMP
POWER CORD
LINE FILTER ASSY
POWER SWITCH

(CBT-2172M)

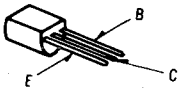
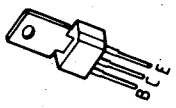
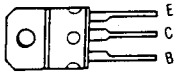

CPT
SCREEN
GND
FOCUS
P801
P802
P401
F.B.T
P901
DEGAUSSINGCOIL
LED PCB
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10
KEY PAD
P01
P02
P504
P102
MAIN PCB
SCART
SPEAKER
P602
P601
P502
P103
TUNER
P101
P501
P503
P5
P1
P3
P11
P13
P4
P10
P12
P7
P14
P8
TUNING PCB
SECAM PCB
SP01
P9
P6
TXT BOARD
XP1
XP2
GND
OUT
B
PRE-AMP
POWER CORD
LINE FILTER ASSY
POWER SWITCH

TERMINAL VIEW OF SEMICONDUCTOR

DIODE

FIGURE	DESCRIPTION	REFERENCE NO.
	1N4148A	D02,D201,D202 D205,D301,D403 D501,D502,D503 D504,D506,D510 D601,D602,D813
	RU-1AV	D701,D703,D704 D805,D806,D807 D808,D810,D811
	1N4005	D801—804
	1N4933GP	D812
	DZ18BLTA	ZD801
	DZ24BLTA DZW11BMTA	ZD802
	Z5.6 BMTA	D603
	DIODE, GU3C	D809

TRANSISTOR

	KTC2229-Y	Q401,Q801
	KTC388A	Q101
	KTC1815-O/Y	Q201,Q202,Q203 Q204,Q02,Q03 Q05,Q602,XQ1 XQ2 ,XQ3,XQ4,Q2
	KTA1015-Y	Q601,Q01,Q08 Q6,Q9,Q10 Q11,Q13,Q14,Q15
	KTC2068	Q901,Q902,Q903
	ZD801,ZD802 2SD1911	Q402,Q802

IC

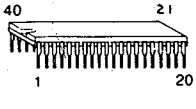
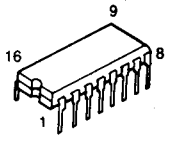
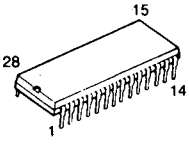
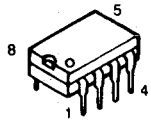
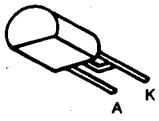
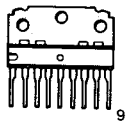
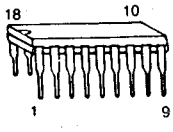
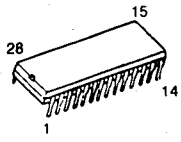
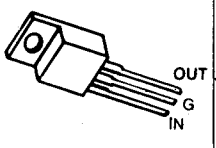
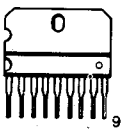
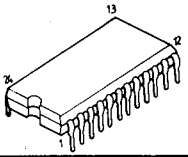
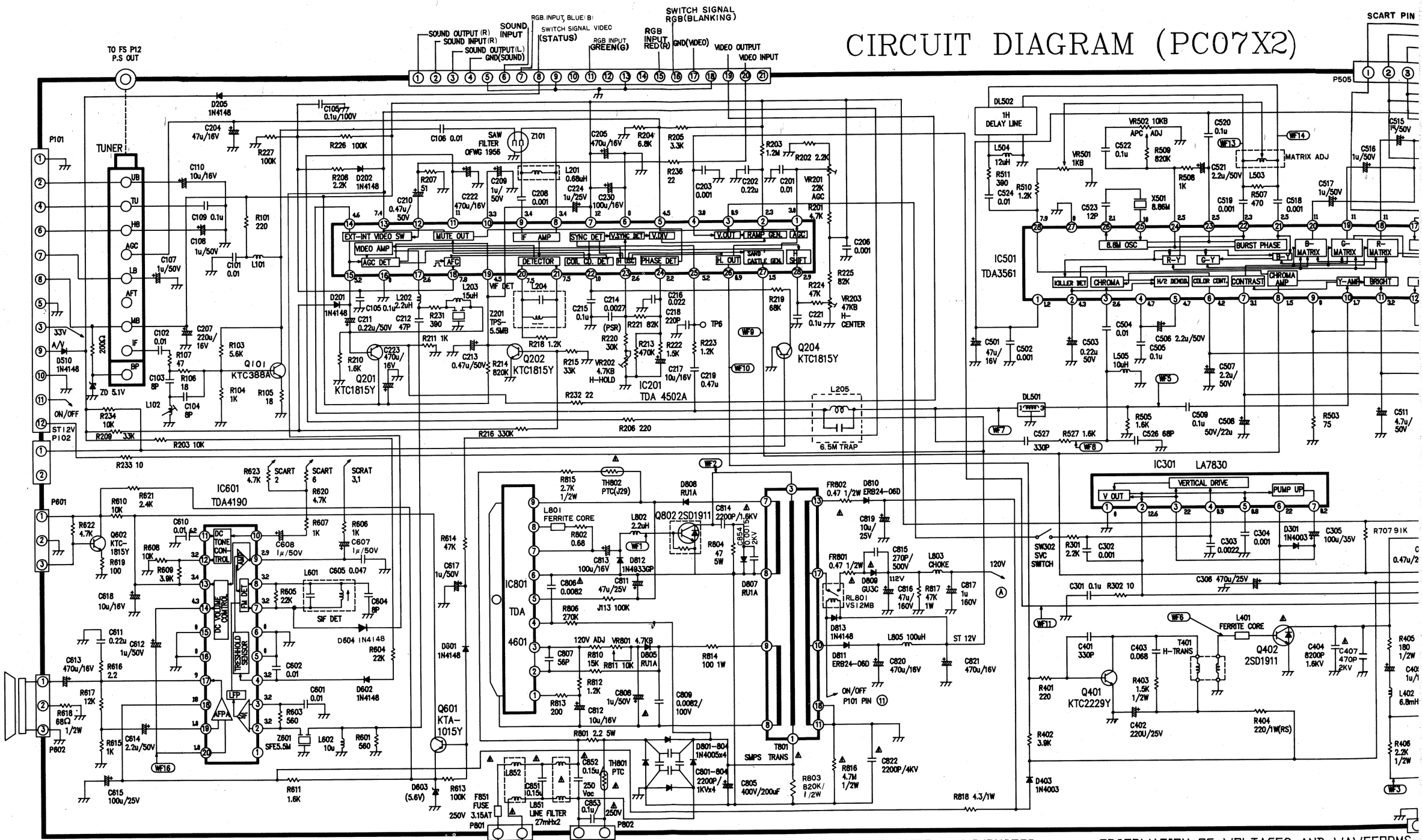
	M3870MAB1/M3870P/M3872MNB1	IC01
	SAA 5243P/E	XIC2 TXT IC

FIGURE	DESCRIPTION	REFERENCE NO.
	L201B/N2001A	IC07
	M206B1	IC02
	M710B1	IC06
	SAA 5231	XIC1, TXT IC
	M705B1	IC03
	LS776C	IC04
	KA33V	ZD701
	LA7830	IC301
	TDA4190	IC601
	TDA3561A	IC501
	TDA3592A	SIC1
	TDA4502A	IC201
	GL7812	IC701
	GL7805	XIC4
	TDA4601	IC801
	GM76C28	XIC3

CIRCUIT DIAGRAM (PC07X2)



The components marked ⚠ conform to VDE or IEC guidelines and are essential for safe operation of the set, while those marked ⚠ are required for correct operation. Use specified parts only when replacing.

NOTICE
Since this a basic circuit diagram. The value of components and some partical connection are Subject to be changed for improvement

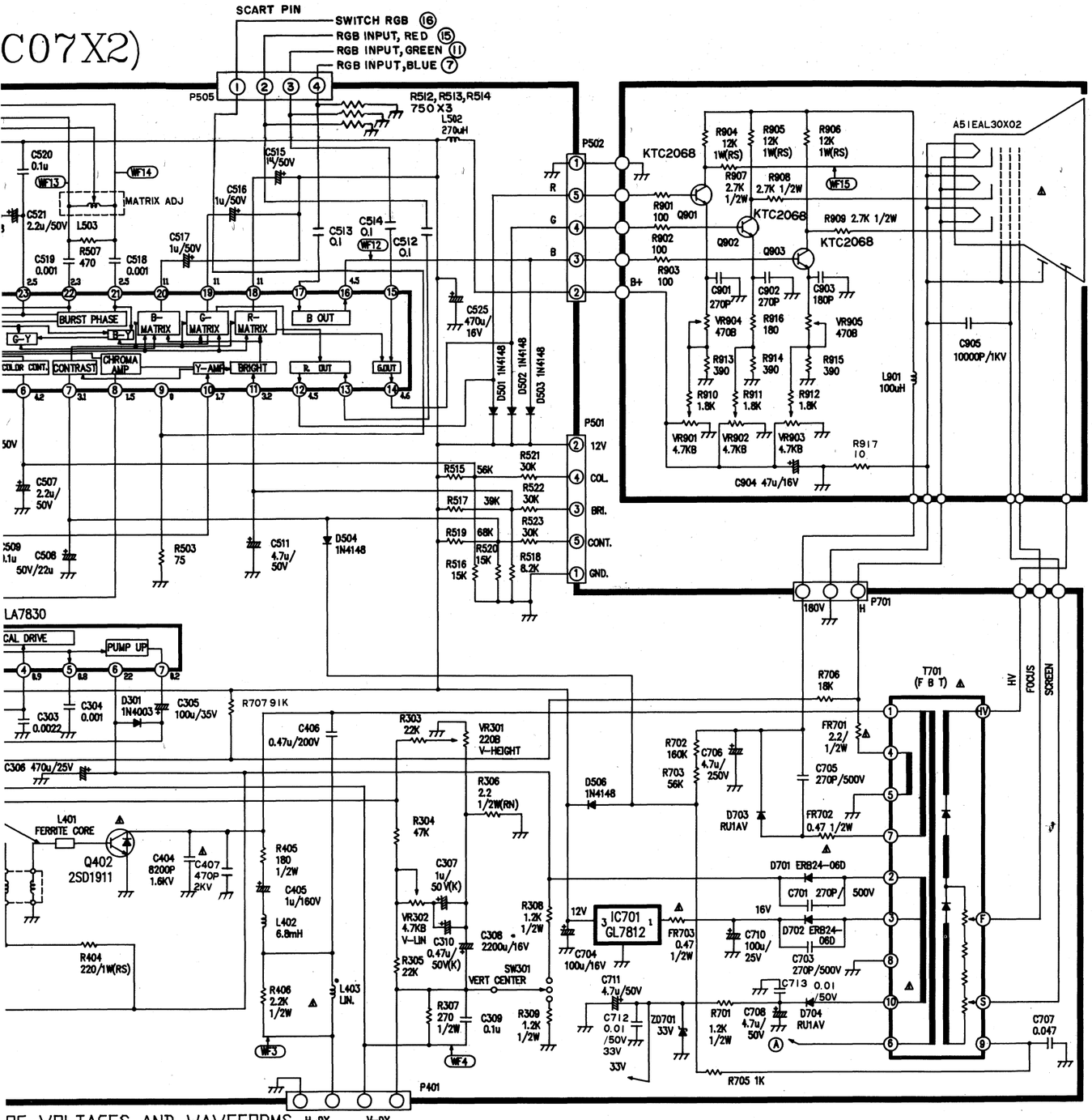
VALUE OF RESISTOR, CAPACITOR and INDUCTOR

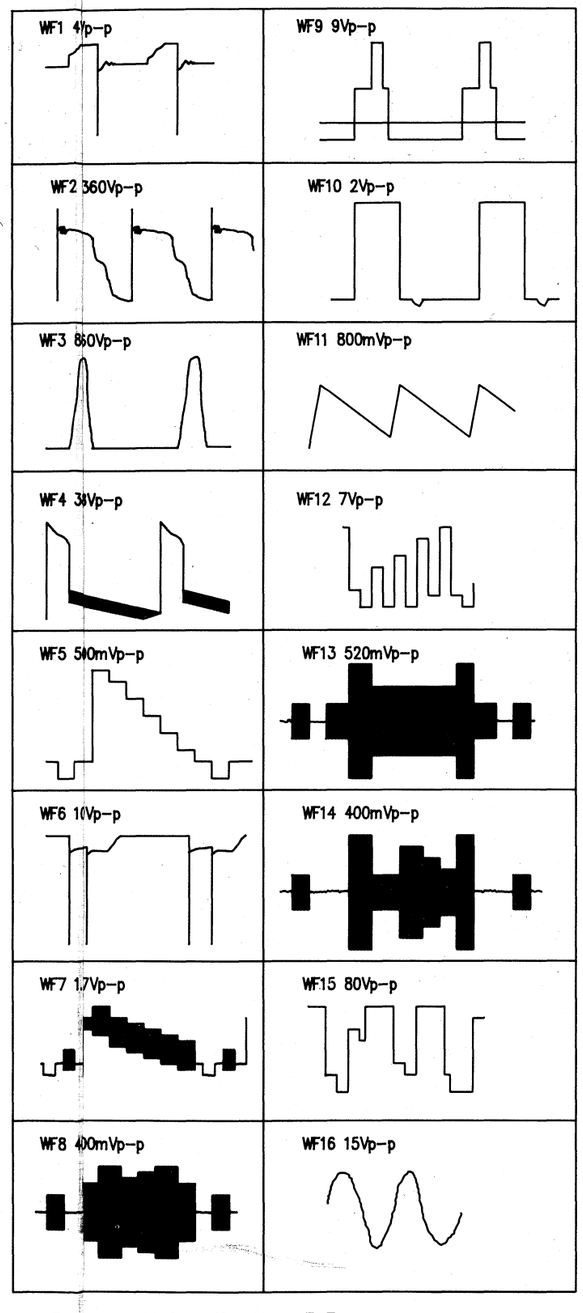
1. Resistance is shown in ohm, k = 1,000, M = 1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in uH, and the values less than 1 in H.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM form point showen to chassis ground, line voltage 180–270V volts, colour bar signal.
2. Voltages reading may vary ±20%
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band oscilloscope and a low capacity probe.

C07X2)





OF VOLTAGES AND WAVEFORMS

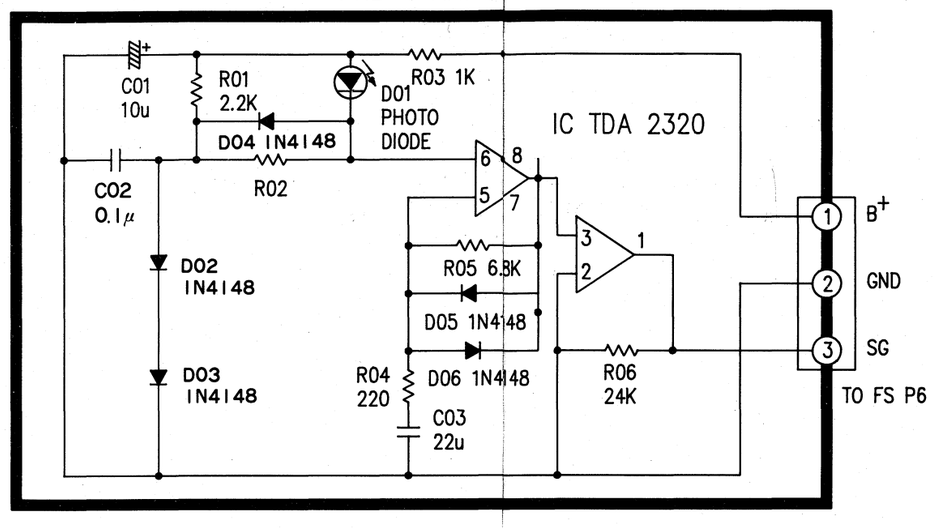
read with VTVM form point showen to chassis
ne voltage 180–270V volts, colour bar signal.
reading may vary ±20%
matic shown is representative only.
orms are taken using a wide band oscilloscope and
acity probe.

5. Check FINE TUNING, AGC, BRIGHTNESS, CONTRAST and COLOUR controls for best picture, make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position.
6. Waveforms are taken using a standard colour bar signal.

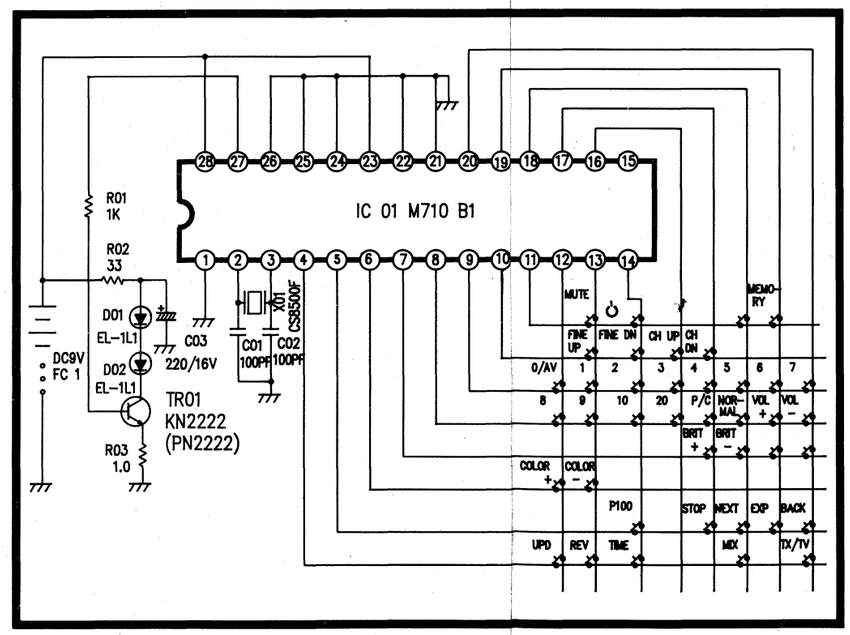
CBT-2172/2175
P / N : 484-513B(1/2)

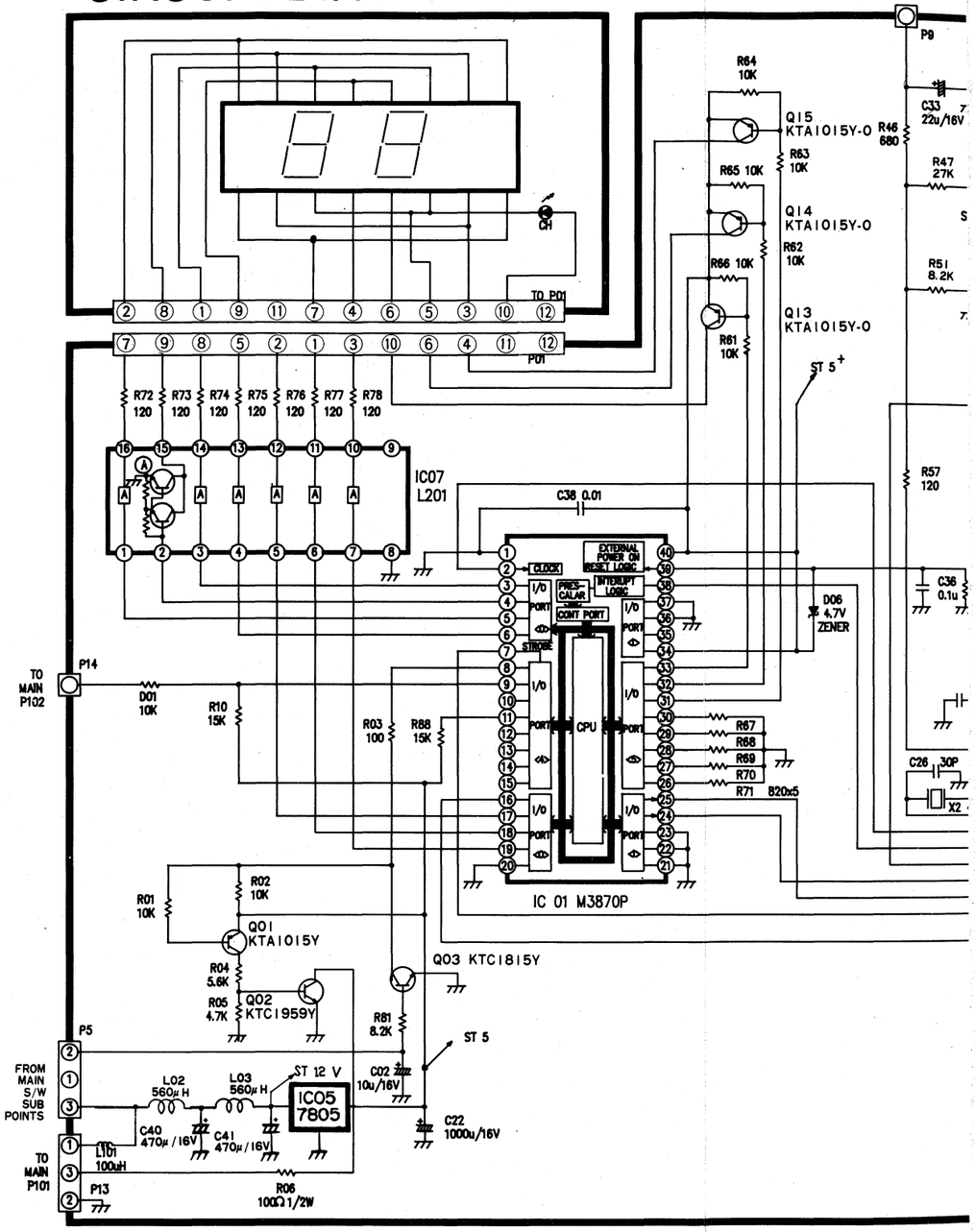
CIRCUIT DIAGRAM FS

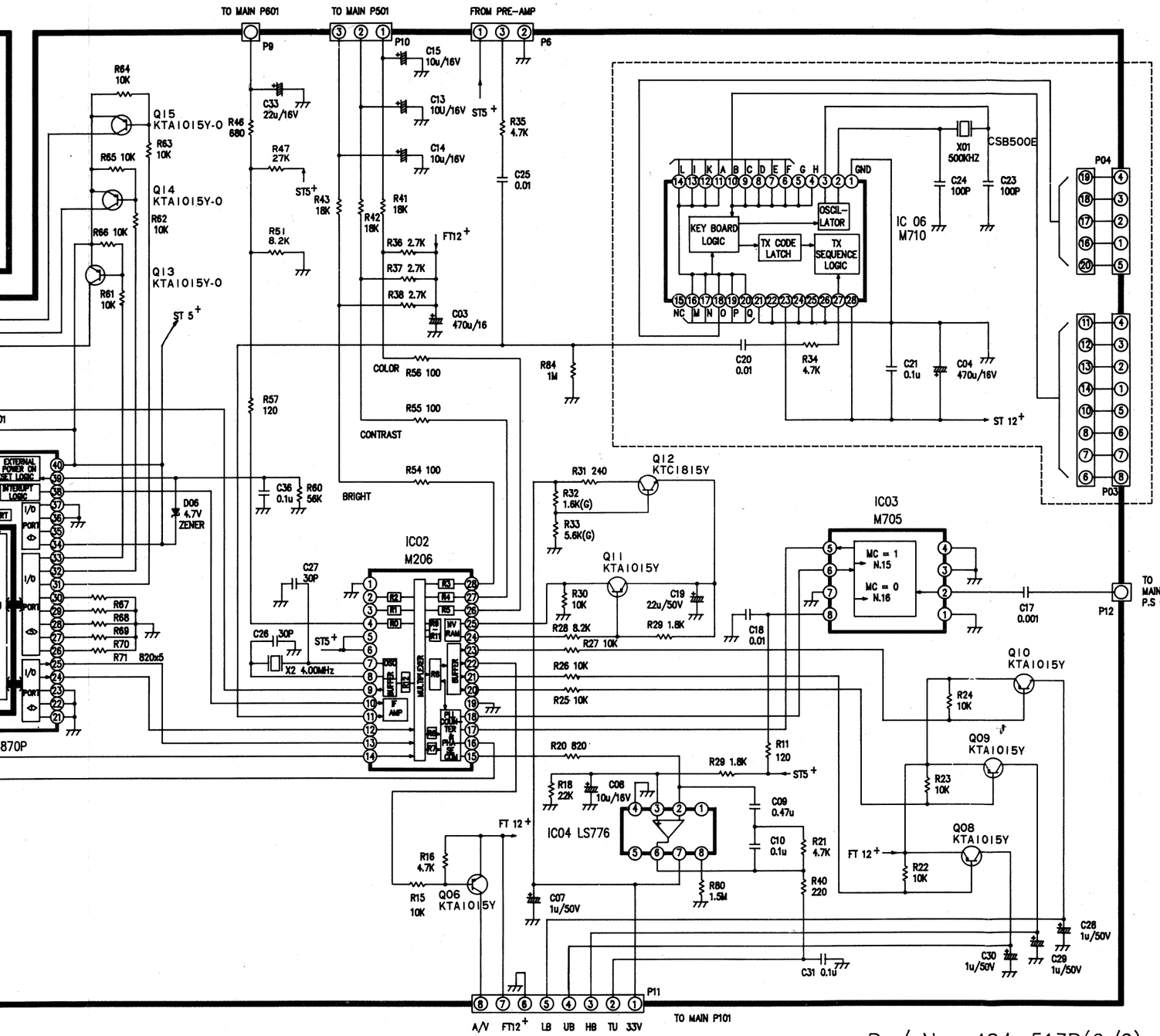
PRE – AMP

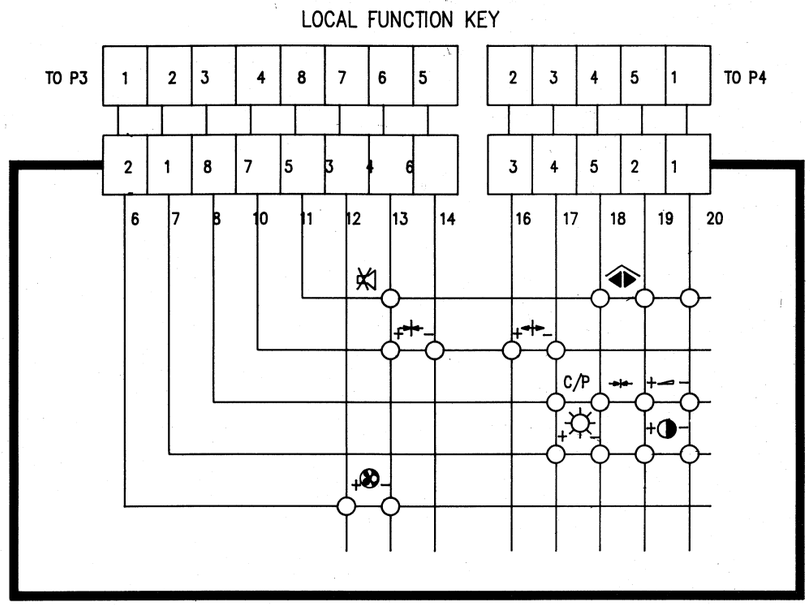


TX SCHEMATIC DIAGRAM



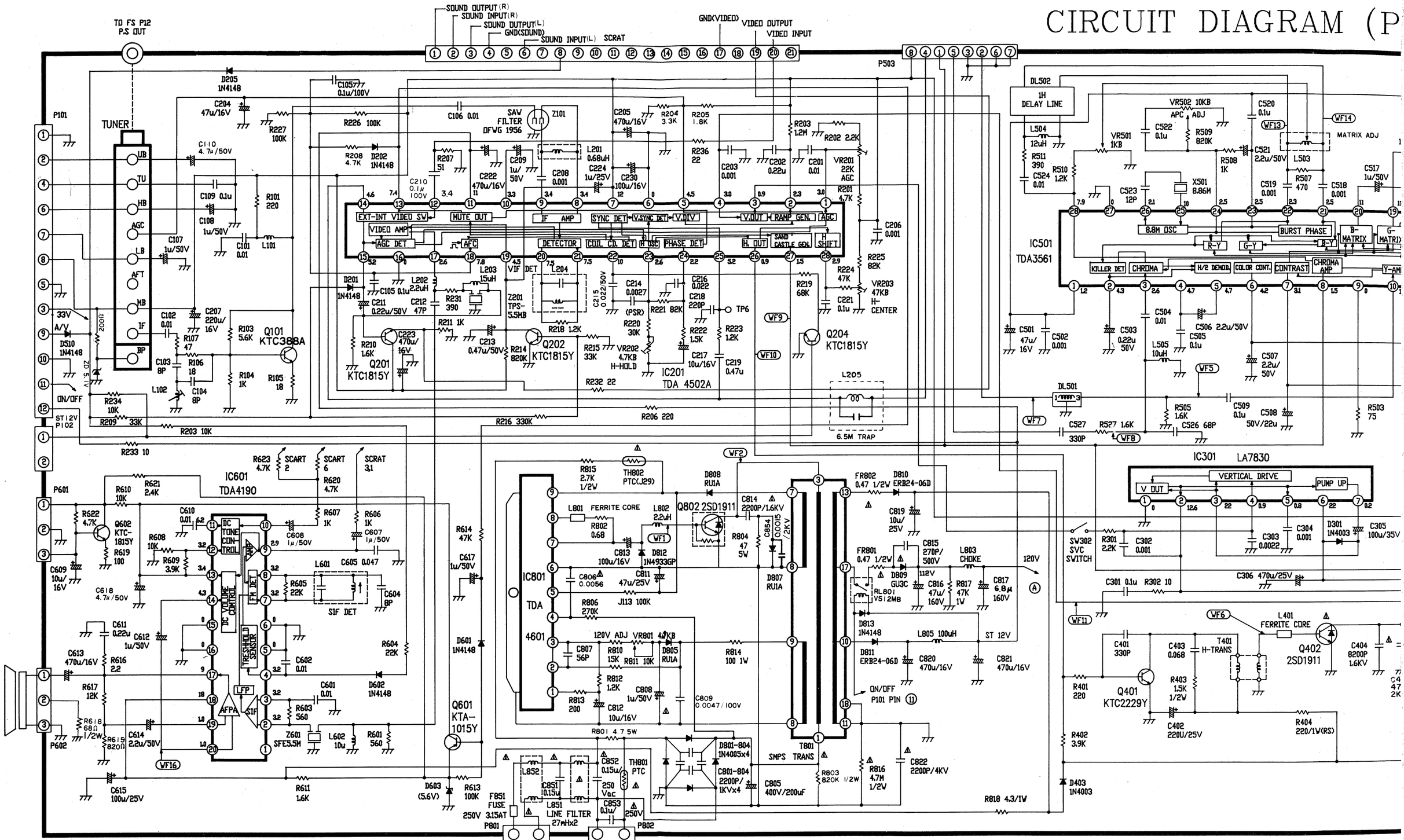






P / N : 484-513B(2/2)

CIRCUIT DIAGRAM (P



The components marked ⚠ conform to VDE or IEC guidelines and are essential for safe operation of the set,while those marked ⚠ are required for correct operation. Use specified parts only when replacing.

NOTICE
Since this a basic circuit diagram. The value of components and some partical connection are subject to be changed for improvement

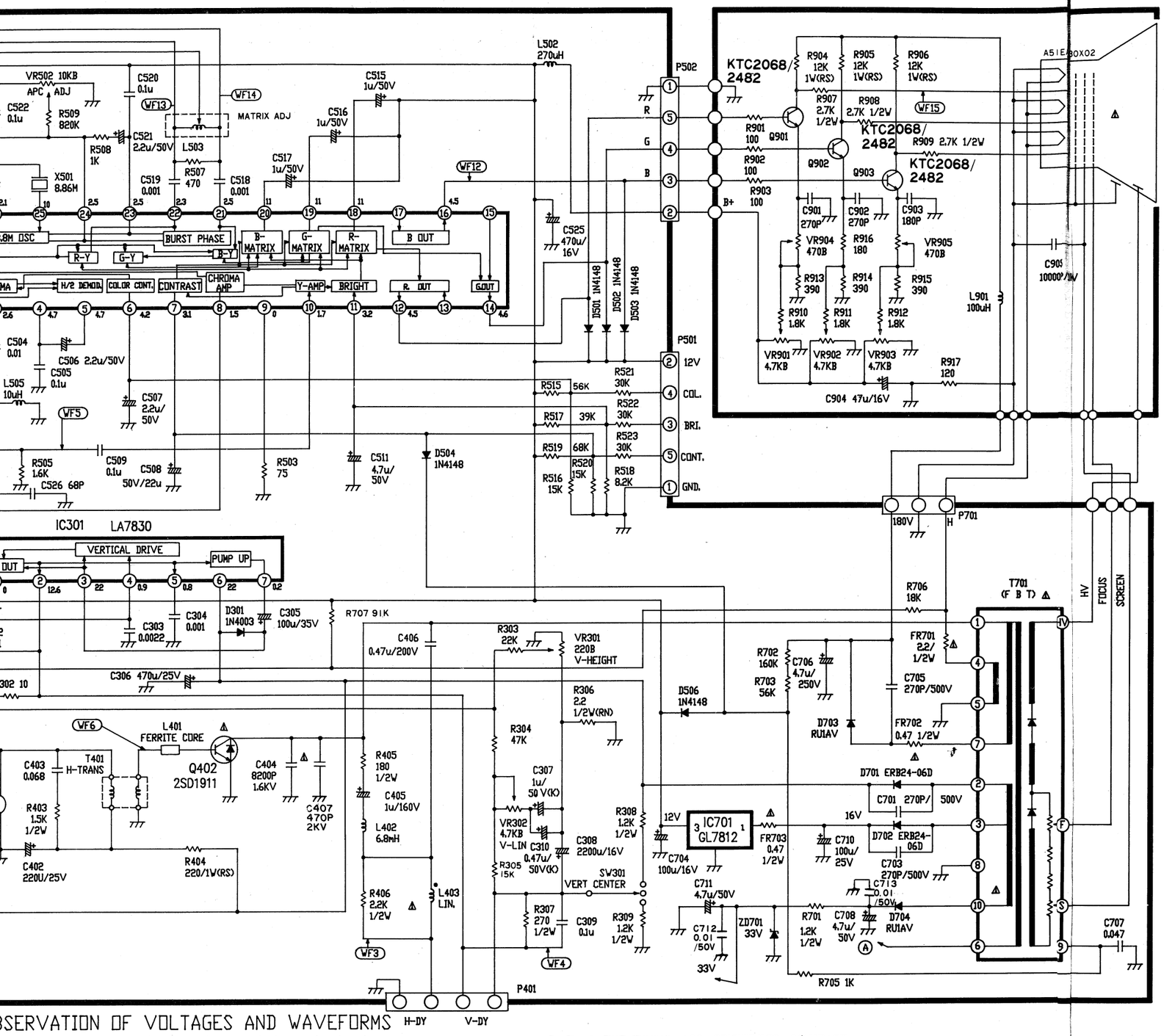
VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k = 1,000, M = 1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in uH, and the values less than 1 in H.

OBSERVATION OF VOLTAGES AND WA

1. Voltages read with VTVM form point showen t ground, line voltage 180–270V volts, colour b
2. Voltages reading may vary ±20%
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band o a low capacity probe.

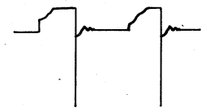
IT DIAGRAM (PC07X2,DDR)



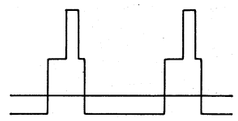
OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM form point showen to chassis ground, line voltage 180–270V volts, colour bar signal.
2. Voltages reading may vary ±20%
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
5. Check FINE TUNING, AGC, BRIGHTNESS, CONTRAST and COLOUR controls for best picture, make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position.
6. Waveforms are taken using a standard colour bar signal.

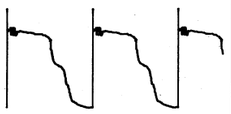
WF1 1.5VP-P



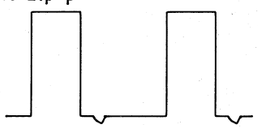
WF9 8.4VP-P



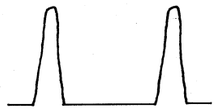
WF2 500VP-P



WF10 2Vp–p

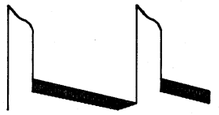


WF3 900VP-P

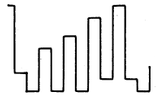


WF11 1VP-P

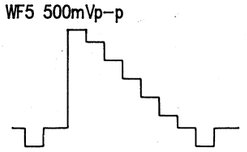
WF4 38Vp–p



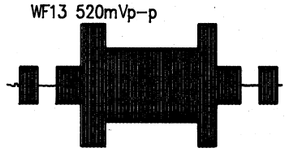
WF12 7Vp–p



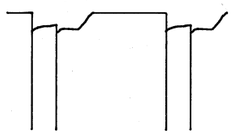
WF5 500mVp–p



WF13 520mVp–p



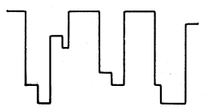
WF6 10Vp–p



WF14 400mVp–p

WF7 1.7VP-P

WF15 80VP-P



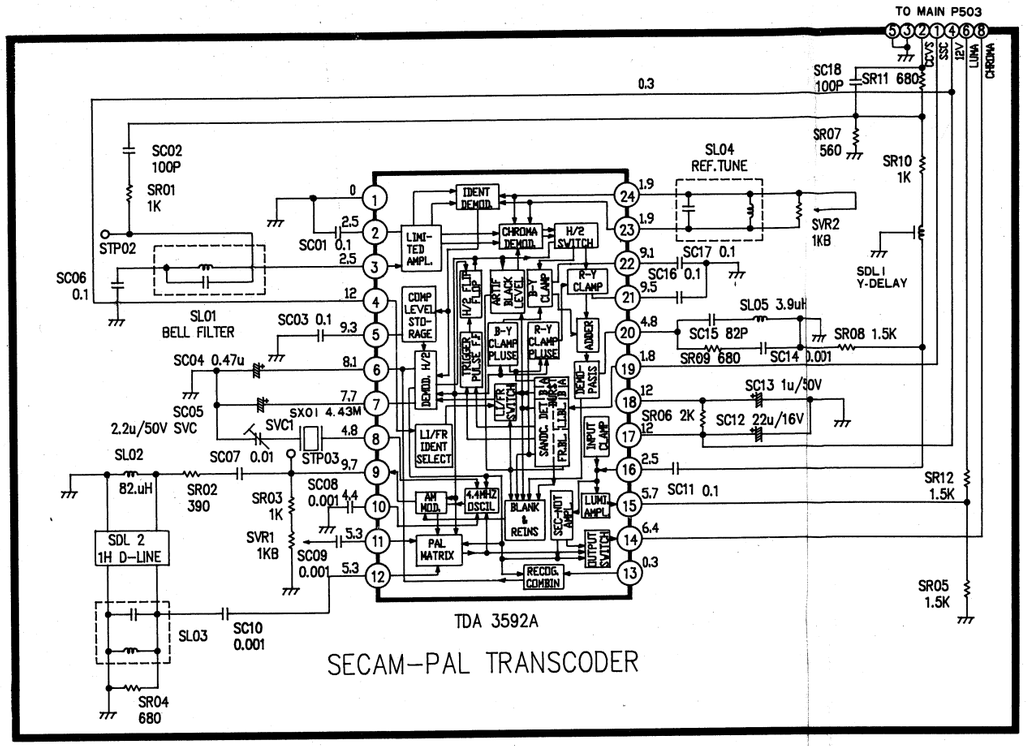
WF8 400mVp–p

WF16 15Vp–p

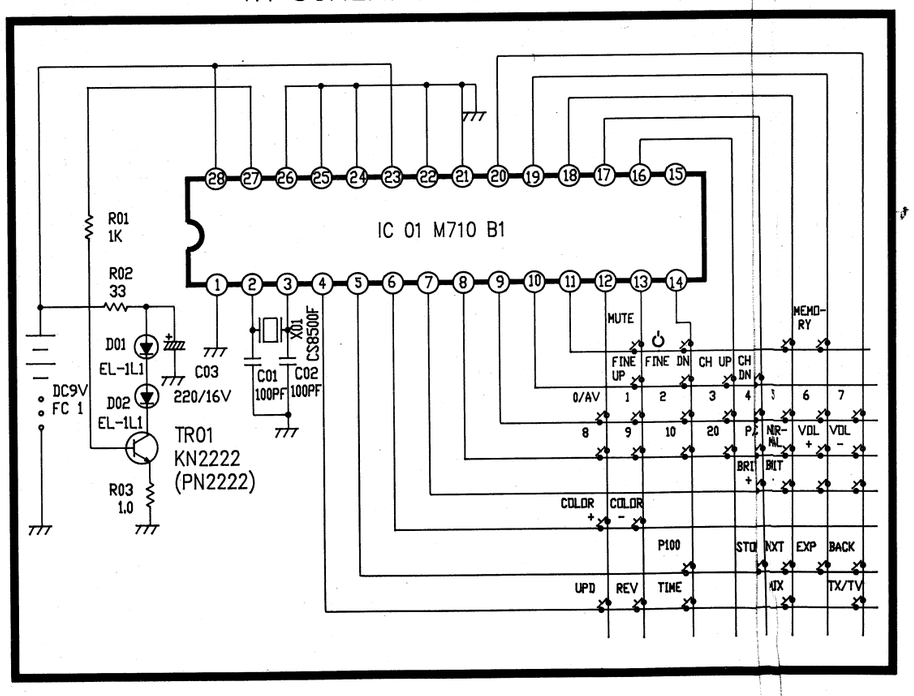
CBT–2172E

P/N 484–513K(1/2)

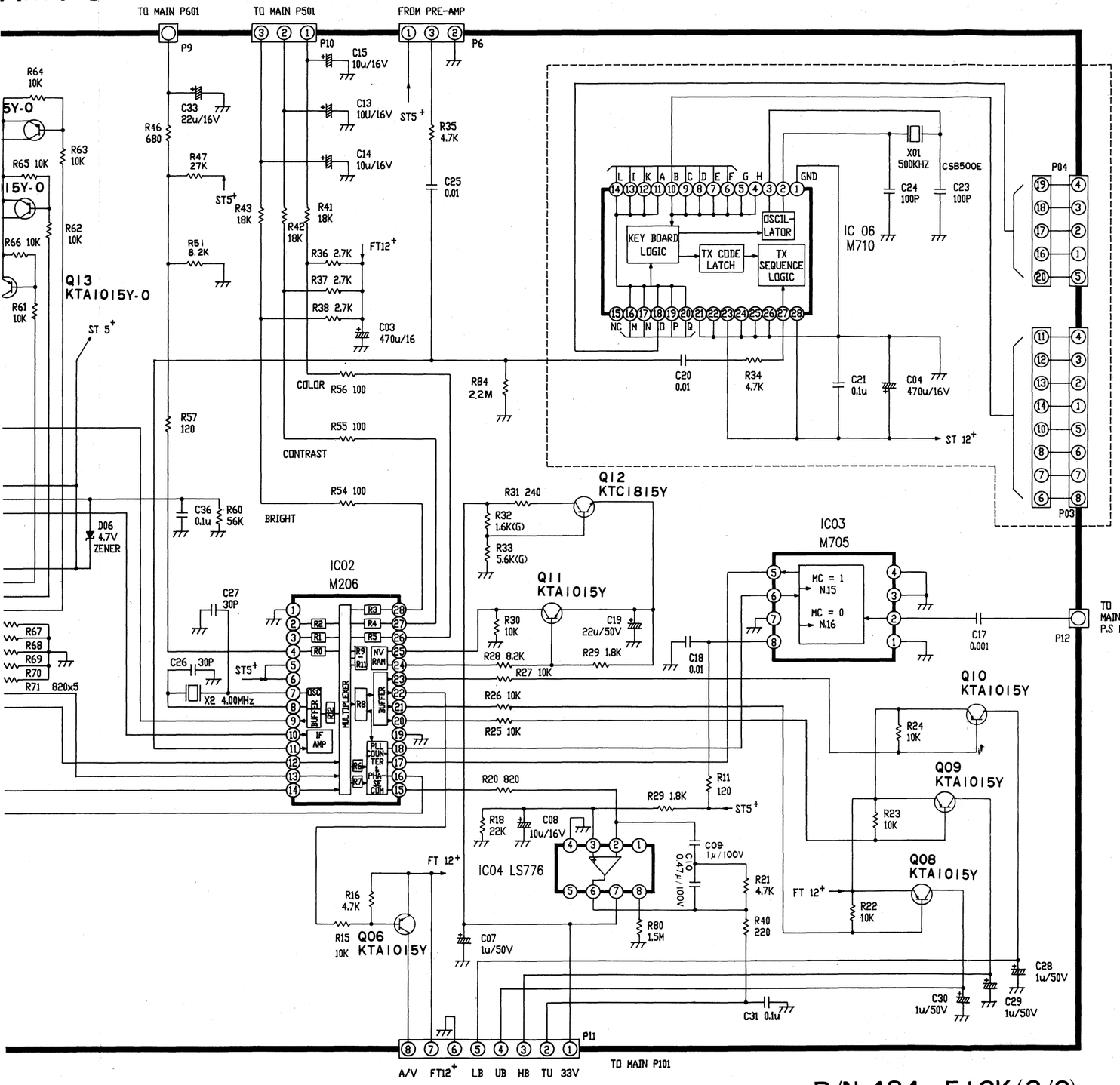
CIRCUIT DIAGRAM FS



TX SCHEMATIC DIAGRAM

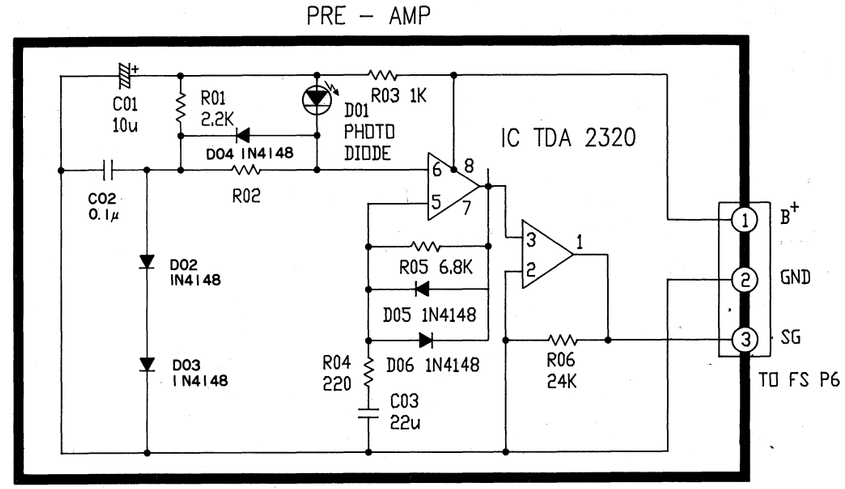


AM FS

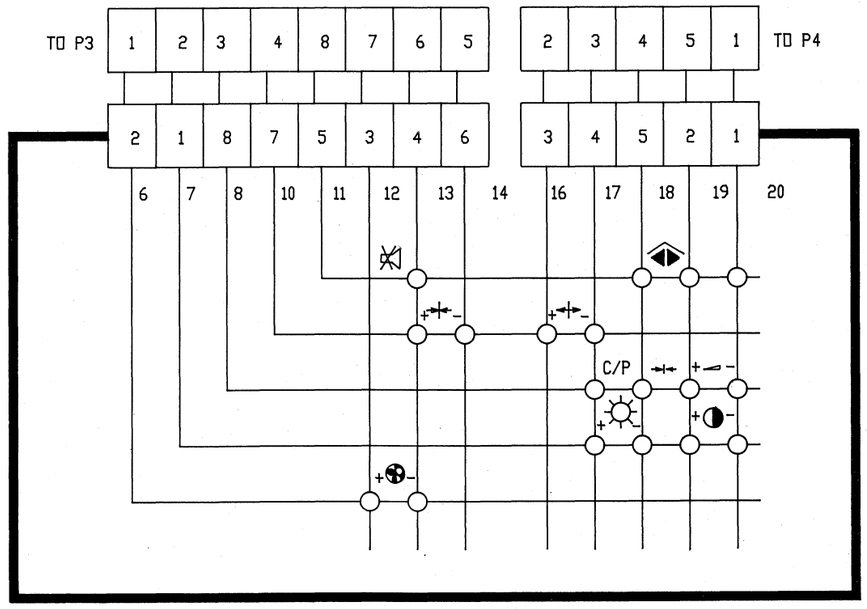


P/N 484-513K(2/2)

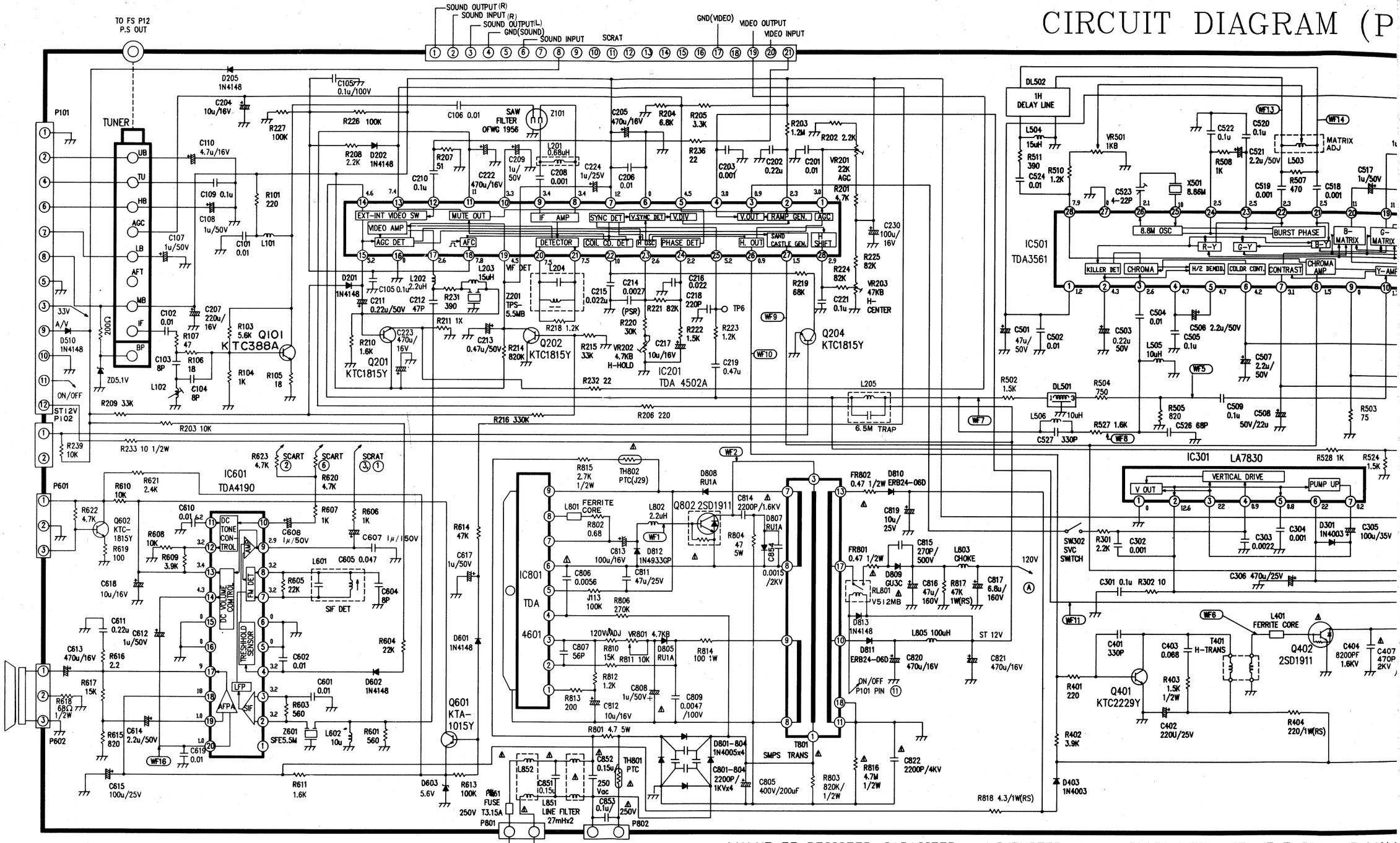
PRE - AMP



LOCAL FUNCTION KEY



CIRCUIT DIAGRAM (P



The components marked ⚠ conform to VDE or IEC guidelines and are essential for safe operation of the set,while those marked ⚠ are requirnd for correct operation. Use specified parts only when replacing

NOTICE
Since this a basic circuit diagram. The value of components and some partical connection are subject to be changed for improvement

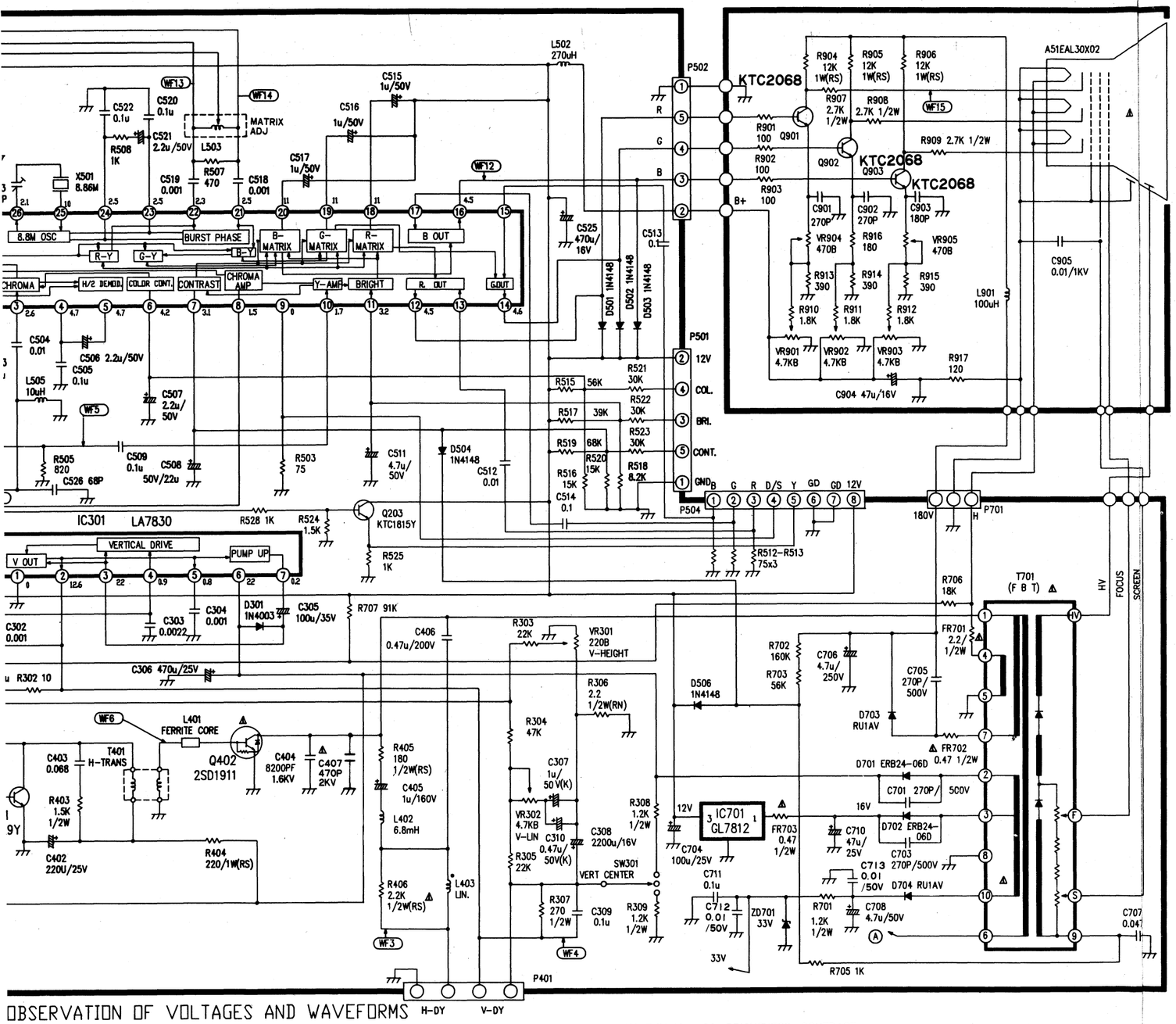
VALUE OF RESISTOR, CAPACITOR and INDUCTOR

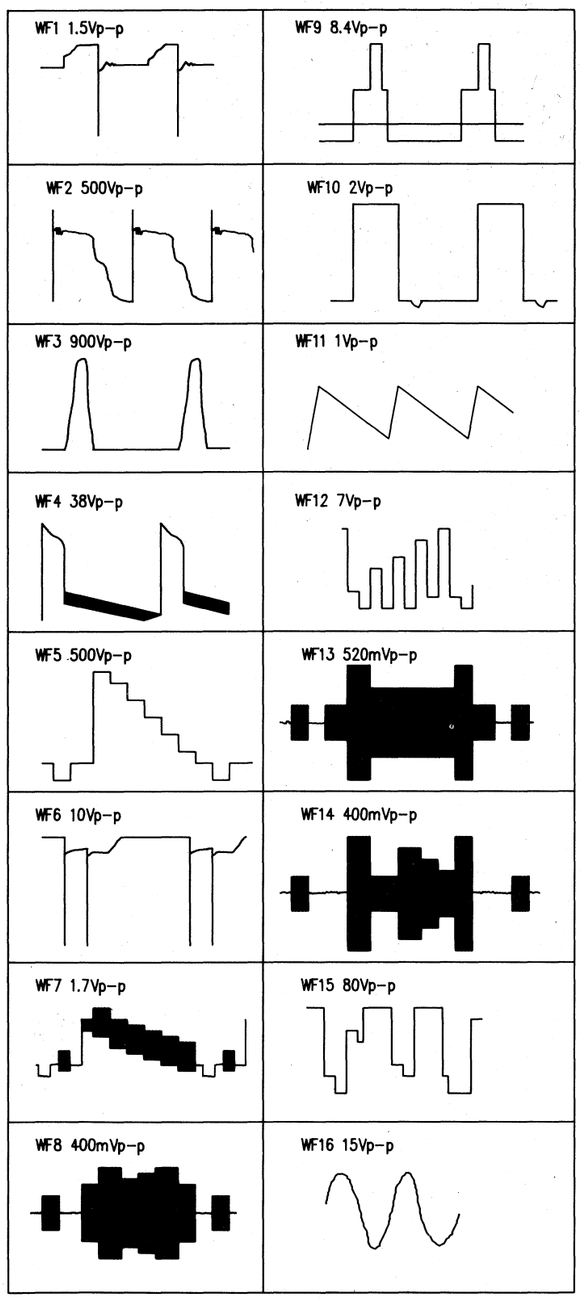
1. Resistance is shown in ohm, k = 1,000, M = 1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in uH, and the values less than 1 in H.

OBSERVATION OF VOLTAGES AND WAV

1. Voltages read with VTVM form point showen to ground, line voltage 180–270V volts, colour ba
2. Voltages reading may vary ±20%
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band os a low capacity probe.

UIT DIAGRAM (PC07X2,CCT)





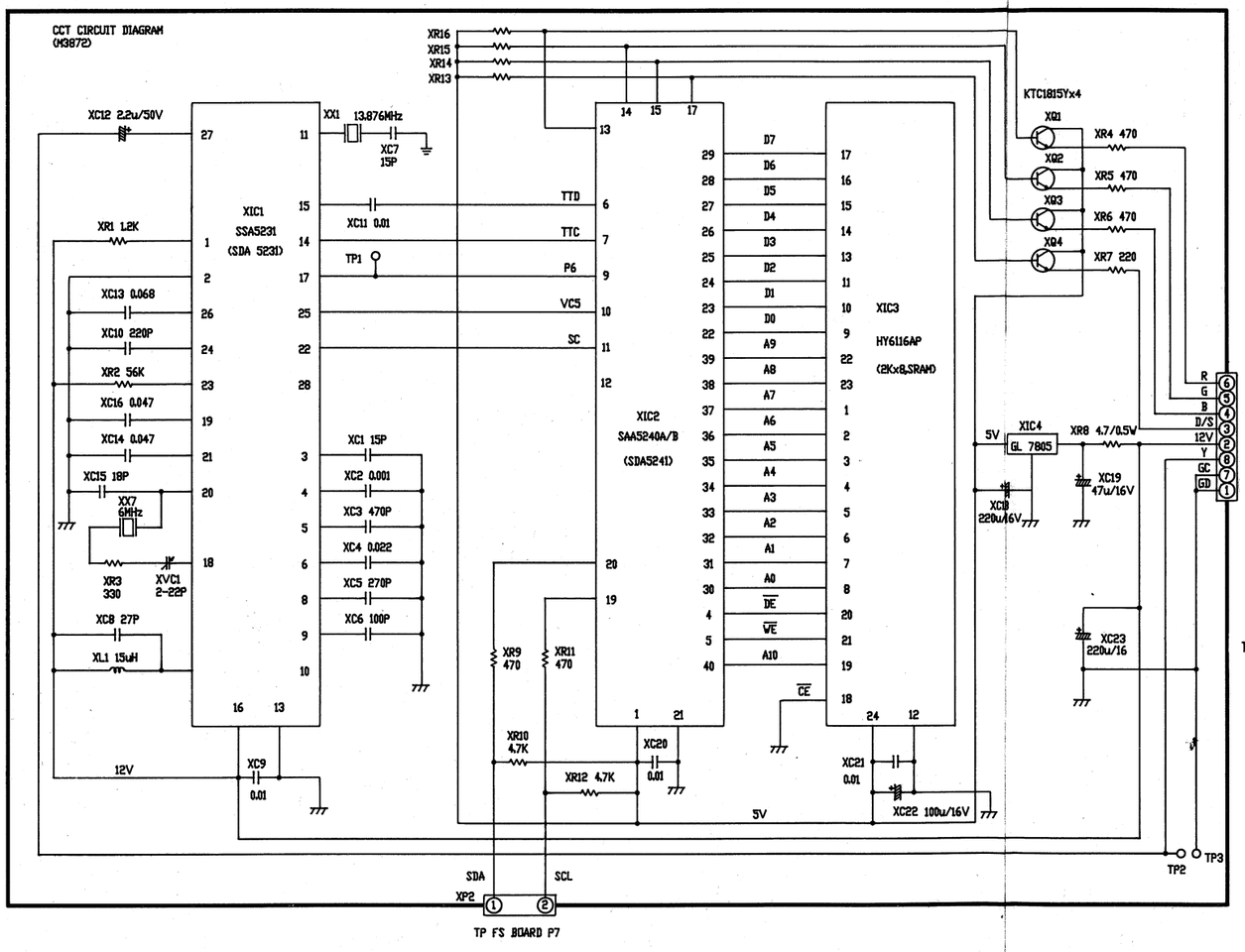
OBSERVATION OF VOLTAGES AND WAVEFORMS

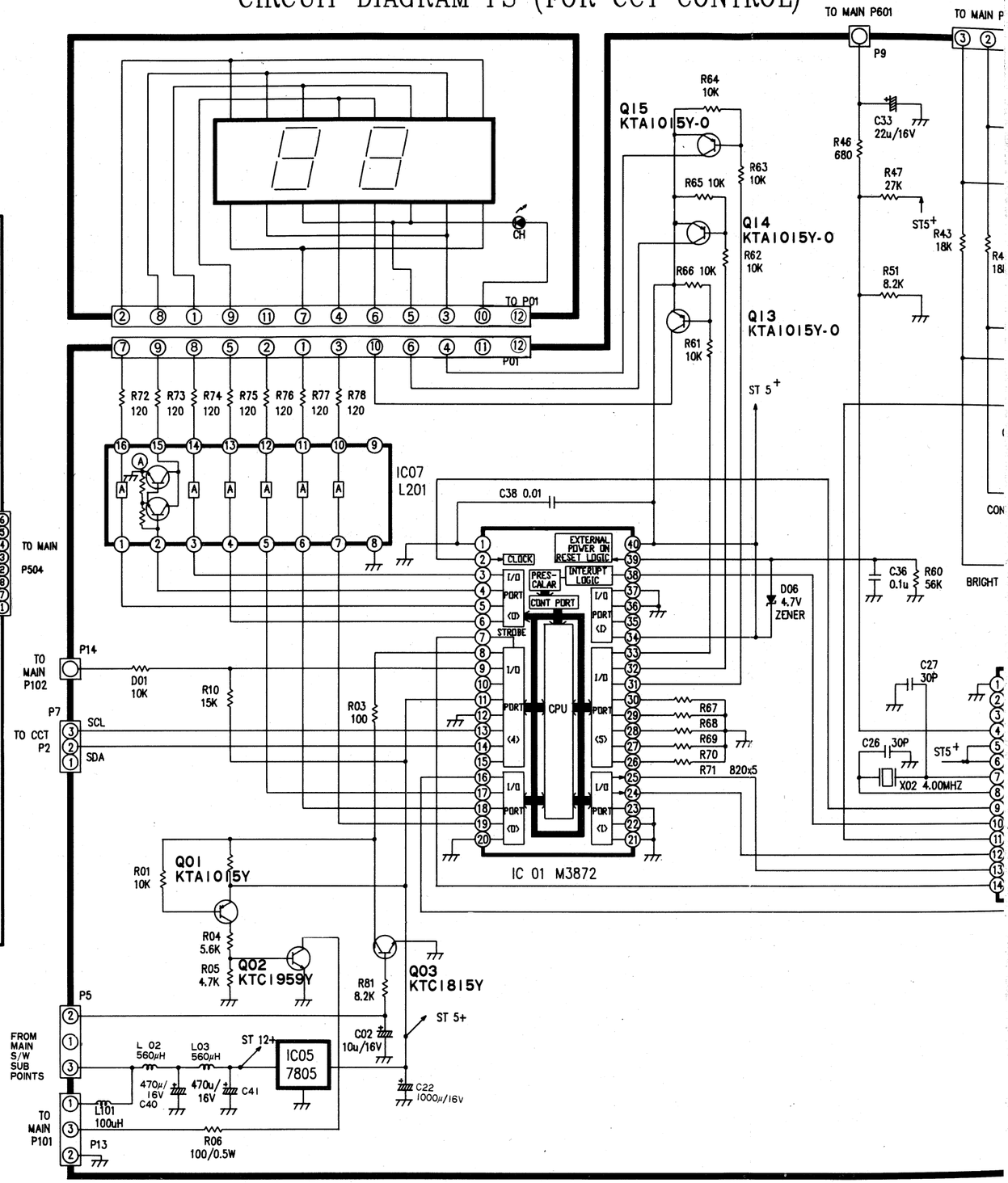
1. Voltages read with VTVM form point showen to chassis ground, line voltage 180–270V volts, colour bar signal.
2. Voltages reading may vary ±20%
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
5. Check FINE TUNING, AGC, BRIGHTNESS, CONTRAST and COLOUR controls for best picture, make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position.
6. Waveforms are taken using a standard colour bar signal.

CBT-2172X, 2175X

P / N : 484-513F(1/2)

CIRCUIT DIAGRAM FS (FOR CCT CONTROL)





CT CONTROL)

TO MAIN P601 · TO MAIN P501 · FROM PRE-AMP · P9 · P10 · P6

R64 10K · R63 10K · R65 10K · Q14 KTA1015Y-O · R62 10K · R66 10K · Q13 KTA1015Y-O · R61 10K

R46 680 · R47 27K · R51 8.2K · R43 18K · R42 18K · R41 18K · R36 2.7K · R37 2.7K · R38 2.7K

C33 22u/16V · C15 10u/16V · C13 10U/16V · C14 10u/16V · C03 470u/16 · C25 0.01 · R35 4.7K

ST5+ · FT12+ · ST 5+ · ST 12+

COLOR R56 100 · CONTRAST R55 100 · BRIGHT R54 100

C36 0.1u · R60 56K · D06 4.7V ZENER

R84 2.2M · C20 0.01 · R34 4.7K · C21 0.1u · C04 470u/16V

CSB500E · X01 500KHZ · C24 100P · C23 100P · IC 06 M710

L I K A B C D E F G H GND

KEY BOARD LOGIC · OSCIL-LATOR · TX CODE LATCH · TX SEQUENCE LOGIC

NC M N O P Q

P04 · P03

Q12 KTC1815Y · R31 240 · R32 1.6K(G) · R33 5.6K(G) · Q11 KTA1015Y · R30 10K · R28 8.2K · R29 1.8K · C19 22u/50V

IC02 M206

MULTIPLEXER · NV RAM · BUFFER · IF AMP · PLL COUNTER · PHASE COM

C27 30P · C26 30P · X02 4.00MHZ · R67 · R68 · R69 · R70 · R71 820x5

IC03 M705

MC = 1 N.15 · MC = 0 N.16

C17 0.001 · C18 0.01 · P12 · TO MAIN TUNER P.S OUT

Q10 KTA1015Y · R24 10K · Q09 KTA1015Y · R23 10K · Q08 KTA1015Y · R22 10K

R20 820 · R19 22K · R11 120 · R18 22K · C08 10u/16V · IC04 LS776 · C09 0.47u · C10 0.1u · R21 4.7K · R40 220 · R80 1.5M

R15 4.7K · R16 10K · Q06 KTA1015Y · FT 12+ · C07 22u/50V · C31 0.1u · C30 1u/50V · C29 1u/50V · C28 1u/50V

P11 · TO MAIN P101

A/V · FT12+ · LB · UB · HB · TU · 33V

PRE – AMP

C01 10u · R01 2.2K · D404 1N4148 · D01 PHOTO DIODE · R03 1K · IC TDA 2320 · C02 100u · R02 · D02 1N4148 · D03 1N4148 · R05 6.8K · D05 1N4148 · R04 220 · D06 1N4148 · C03 22u · R06 24k · B+ · GND · SG · TO FS P6

TX SCHEMATIC DIAGRAM

IC 01 M710 B1

R01 1K · R02 33 · D01 EL-1L1 · D02 EL-1L1 · C03 220/16V · X01 CSB500F · C01 100PF · C02 100PF · TR01 KN2222 (PN2222) · R03 1.0 · DC9V FC 1

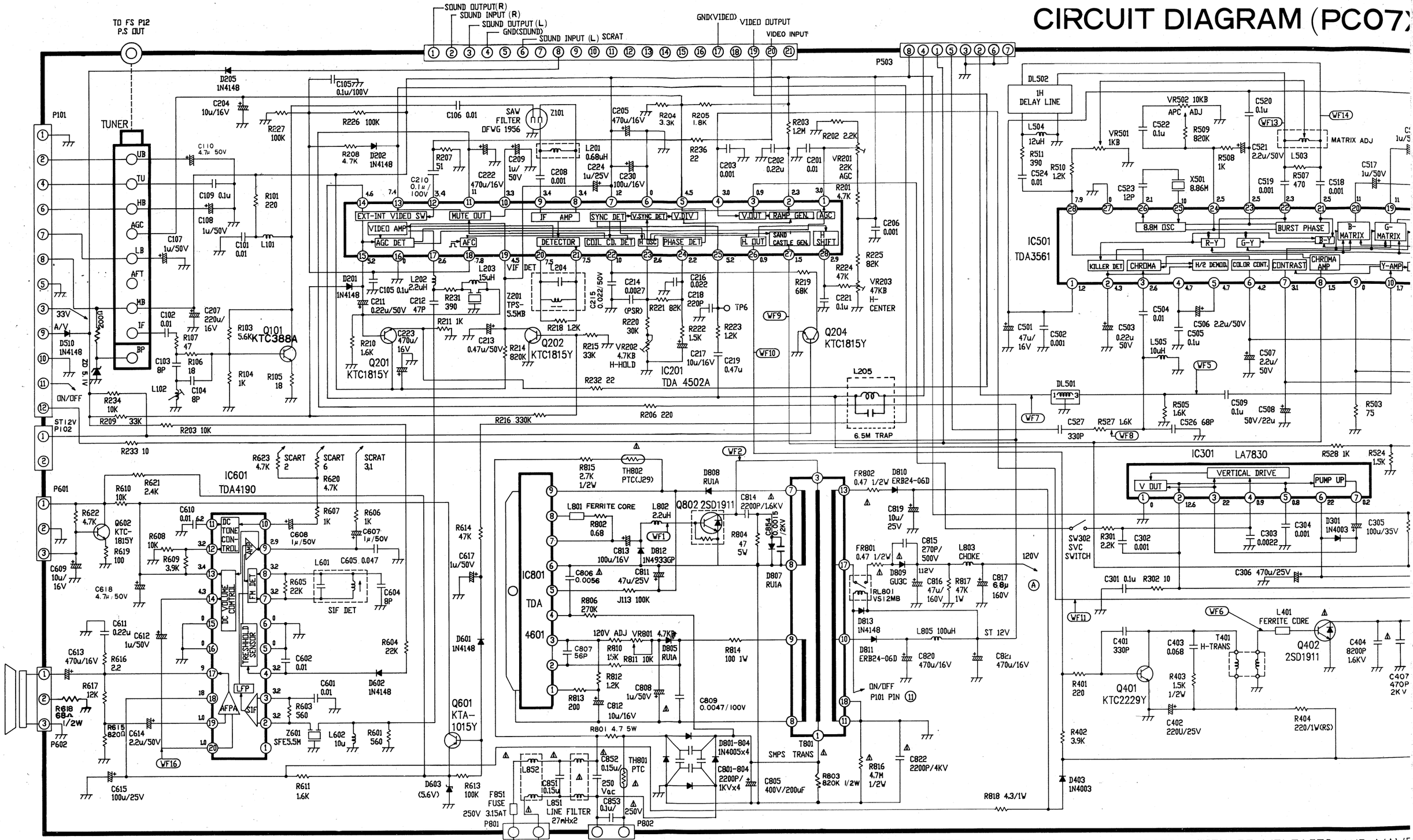
MUTE · MEMO-RY · FINE UP · FINE DN · CH UP · CH DN · 0/AV · P/C · NOR-MAL · VOL + · VOL - · BRIT + · BRIT - · COLOR + · COLOR - · P100 · STOP · NEXT · EXP · BACK · UPD · REV · TIME · MIX · TX/TV

LOCAL FUNCTION KEY

TO P3 · TO P4 · C/P

P / N : 484-513F(2/2)

CIRCUIT DIAGRAM (PC07)



The components marked ⚠ conform to VDE or IEC guidelines and are essential for safe operation of the set,while those marked ⚠ are required for correct operation. Use specified parts only when replacing.

NOTICE
Since this a basic circuit diagram. The value of components and some partical connection are subject to be changed for improvement

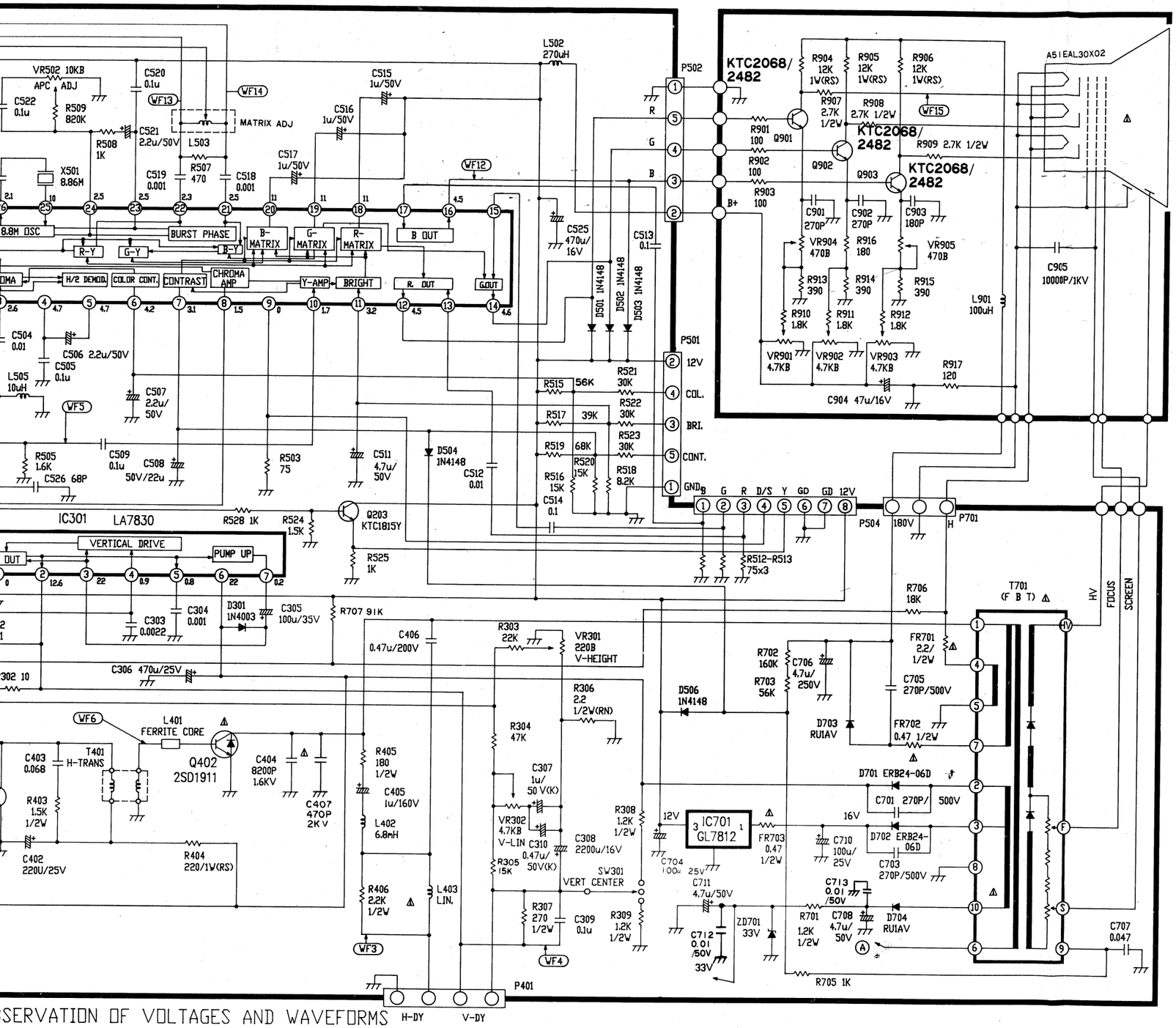
VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k = 1,000, M = 1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in uH, and the values less than 1 in H.

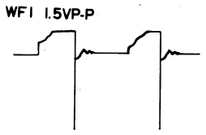
OBSERVATION OF VOLTAGES AND WAVE

1. Voltages read with VTVM form point showen to ground, line voltage 180–270V volts, colour bar
2. Voltages reading may vary ±20%
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band osci a low capacity probe.

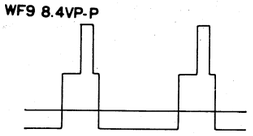
T DIAGRAM (PCO7X2, CCT, DDR)



WF1 1.5VP-P

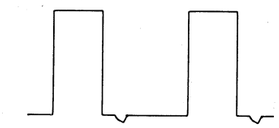


WF9 8.4VP-P

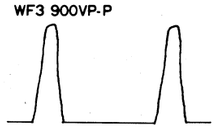


WF2 500VP-P

WF10 2Vp-p

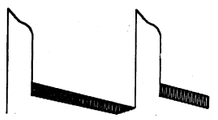


WF3 900VP-P

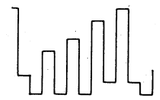


WF11 1VP-P

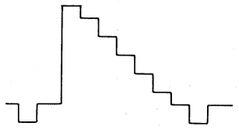
WF4 38Vp-p



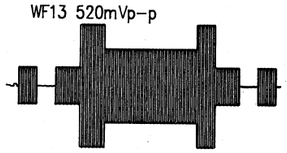
WF12 7Vp-p



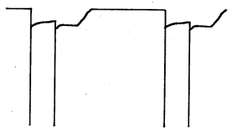
WF5 500mVp-p



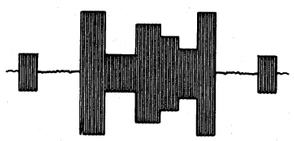
WF13 520mVp-p



WF6 10Vp-p

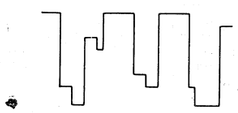


WF14 400mVp-p



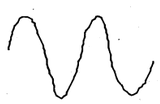
WF7 1.7VP-P

WF15 80VP-P



WF8 400mVp-p

WF16 15Vp-p



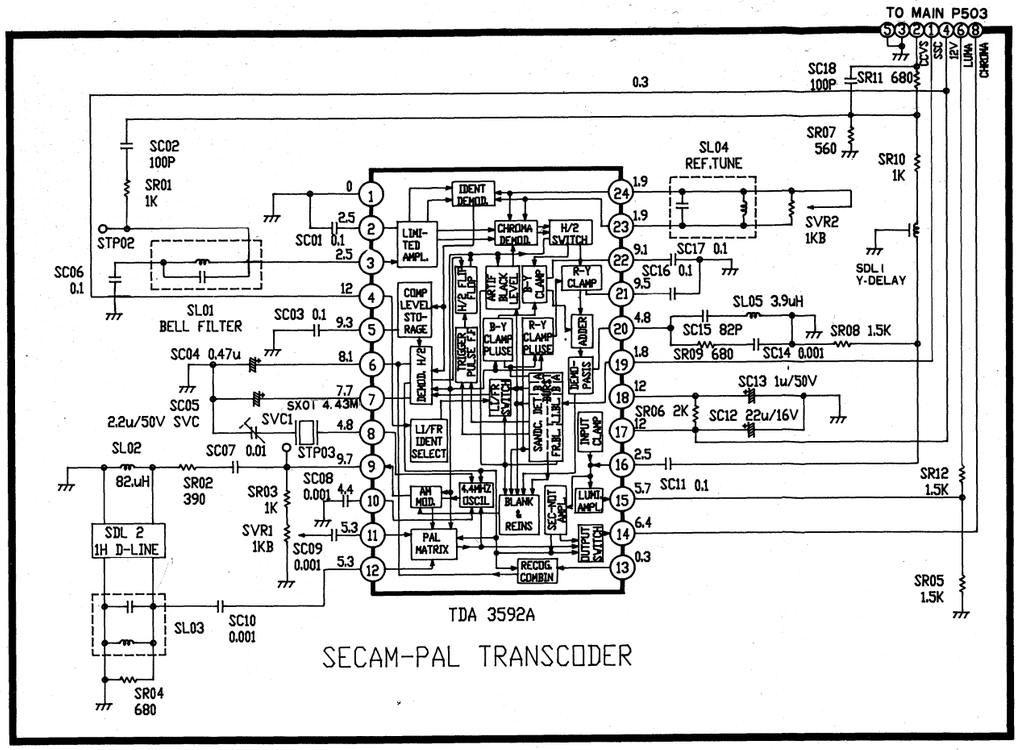
CBT-2172M

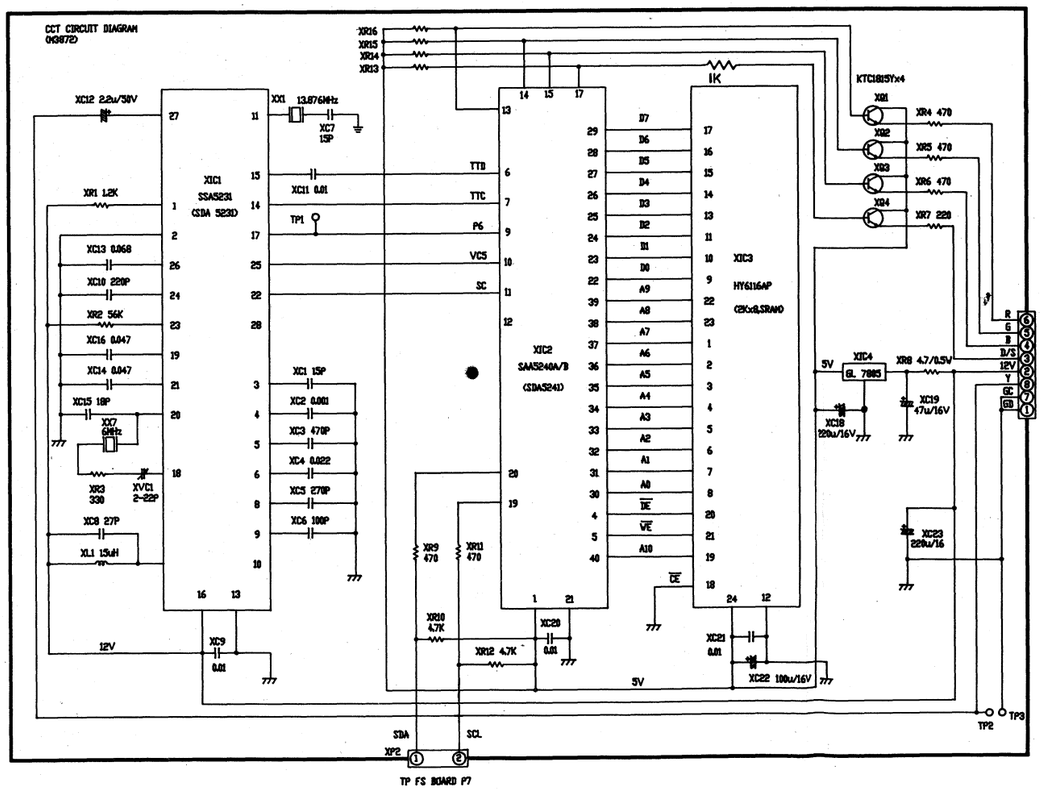
P / N : 484-513H(1/2)

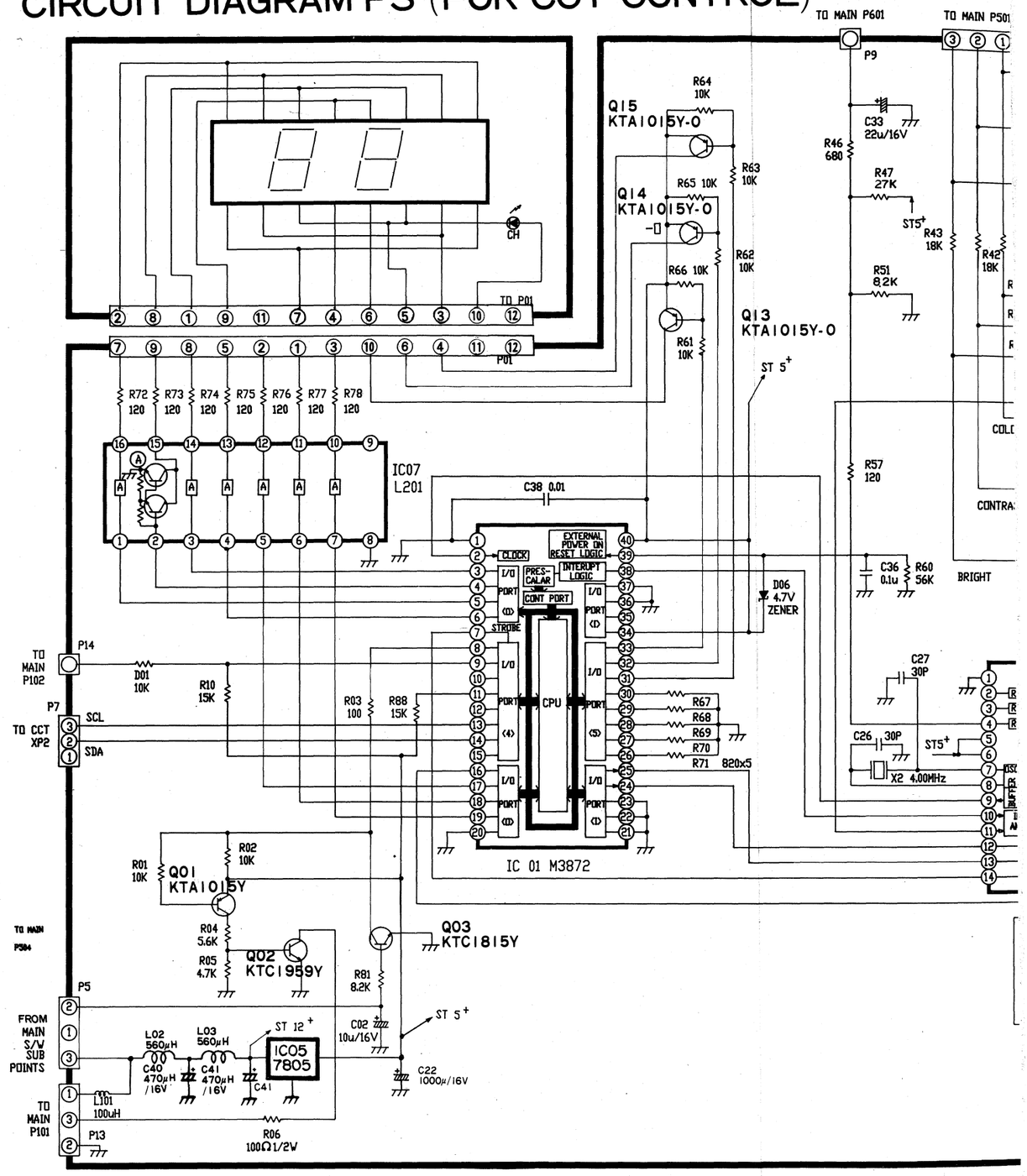
SERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM form point showen to chassis ground, line voltage 180–270V volts, colour bar signal.
2. Voltages reading may vary ±20%
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
5. Check FINE TUNING, AGC, BRIGHTNESS, CONTRAST and COLOUR controls for best picture, make sure that CONTRAST and COLOUR controls are in maximum position. BRIGHTNESS control is almost in maixmum position.
6. Waveforms are taken using a standard colour bar signal.

CIRCUIT DIAGRAM FS (FOR CCT CONTROL)







CONTROL)

TO MAIN P601 | TO MAIN P501 | FROM PRE-AMP

P9 | P10 | P6

C15 10u/16V | C13 10U/16V | C14 10u/16V | C33 22u/16V | C25 0.01 | C03 470u/16

R64 10K | R63 10K | R65 10K | R62 10K | R66 10K | R61 10K

Q13 KTA1015Y-O

R46 680 | R47 27K | R43 18K | R41 18K | R42 18K | R51 8.2K

R35 4.7K | R36 2.7K | R37 2.7K | R38 2.7K

ST5+ | FT12+ | ST 5+ | ST 12+

COLOR R56 100 | CONTRAST R55 100 | BRIGHT R54 100

R84 2.2M | R57 120 | C36 0.1u | R60 56K | D06 4.7V ZENER

IC 06 M710

KEY BOARD LOGIC | TX CODE LATCH | TX SEQUENCE LOGIC | OSCIL-LATOR

L I K A B C D E F G H GND

NC M N O P Q

X01 500KHZ CSB500E | C24 100P | C23 100P

C20 0.01 | R34 4.7K | C21 0.1u | C04 470u/16V

P04 | P03

Q12 KTC1815Y

R31 240 | R32 1.6K(G) | R33 5.6K(G)

IC02 M206

C27 30P | C26 30P | X2 4.00MHz

R67 | R68 | R69 | R70 | R71 820x5

Q11 KTA1015Y

R30 10K | C19 22u/50V | R29 1.8K | R28 8.2K | R27 10K

R26 10K | R25 10K

IC03 M705

MC = 1 N.15 | MC = 0 N.16

C18 0.01 | C17 0.001 | P12

TO MAIN TUNER P.S OUT

Q10 KTA1015Y

R24 10K

Q09 KTA1015Y

R23 10K

Q08 KTA1015Y

R22 10K

R11 120 | R20 820 | R29 1.8K | ST5+

R18 22K | C08 10u/16V | IC04 LS776 | C09 1μ/100V | C10 0.47μ/100V | R21 4.7K | R40 220 | R80 1.5M

FT 12+ | R16 4.7K | R15 10K | Q06 KTA1015Y

C07 1u/50V | C28 1u/50V | C30 1u/50V | C29 1u/50V | C31 0.1u

P11

A/V | FT12+ | LB | UB | HB | TU | 33V

TO MAIN P101

P / N : 484-513H(2/2)

PRE - AMP

C01 10u | R01 2.2K | D04 1N4148 | R03 1K | D01 PHOTO DIODE | IC TDA 2320

C02 0.1μ | R02 | D02 1N4148 | D03 1N4148 | R05 6.8K | D05 1N4148 | R04 220 | D06 1N4148 | C03 22u | R06 24K

B+ | GND | SG | TO FS P6

TX SCHEMATIC DIAGRAM

IC 01 M710 B1

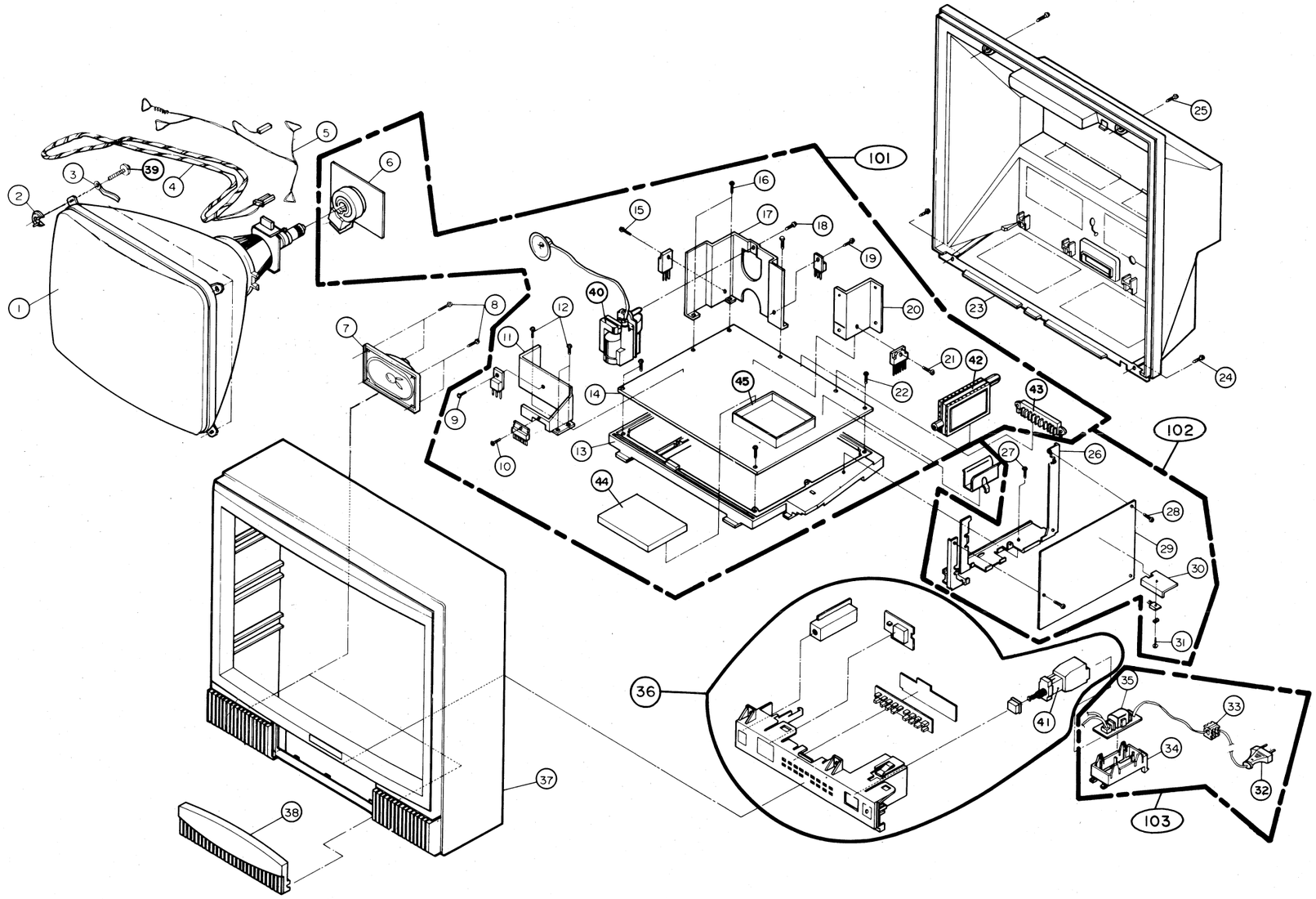
R01 1K | R02 33 | D01 EL-1L1 | D02 EL-1L1 | DC9V FC 1 | C03 220/16V | C01 100PF | X01 CSB500F | C02 100PF | TR01 KN2222 (PN2222) | R03 1.0

MUTE | MEMO-RY | FINE UP | FINE DN | CH UP | CH DN | 0/AV | P/C | NOR-MAL | VOL + | VOL - | BRIT + | BRIT - | COLOR + | COLOR - | P100 | STOP | NEXT | EXP | BACK | UPD | REV | TIME | MIX | TX/TV

LOCAL FUNCTION KEY

TO P3 | TO P4 | C/P

EXPLODED VIEW (CBT–2172)



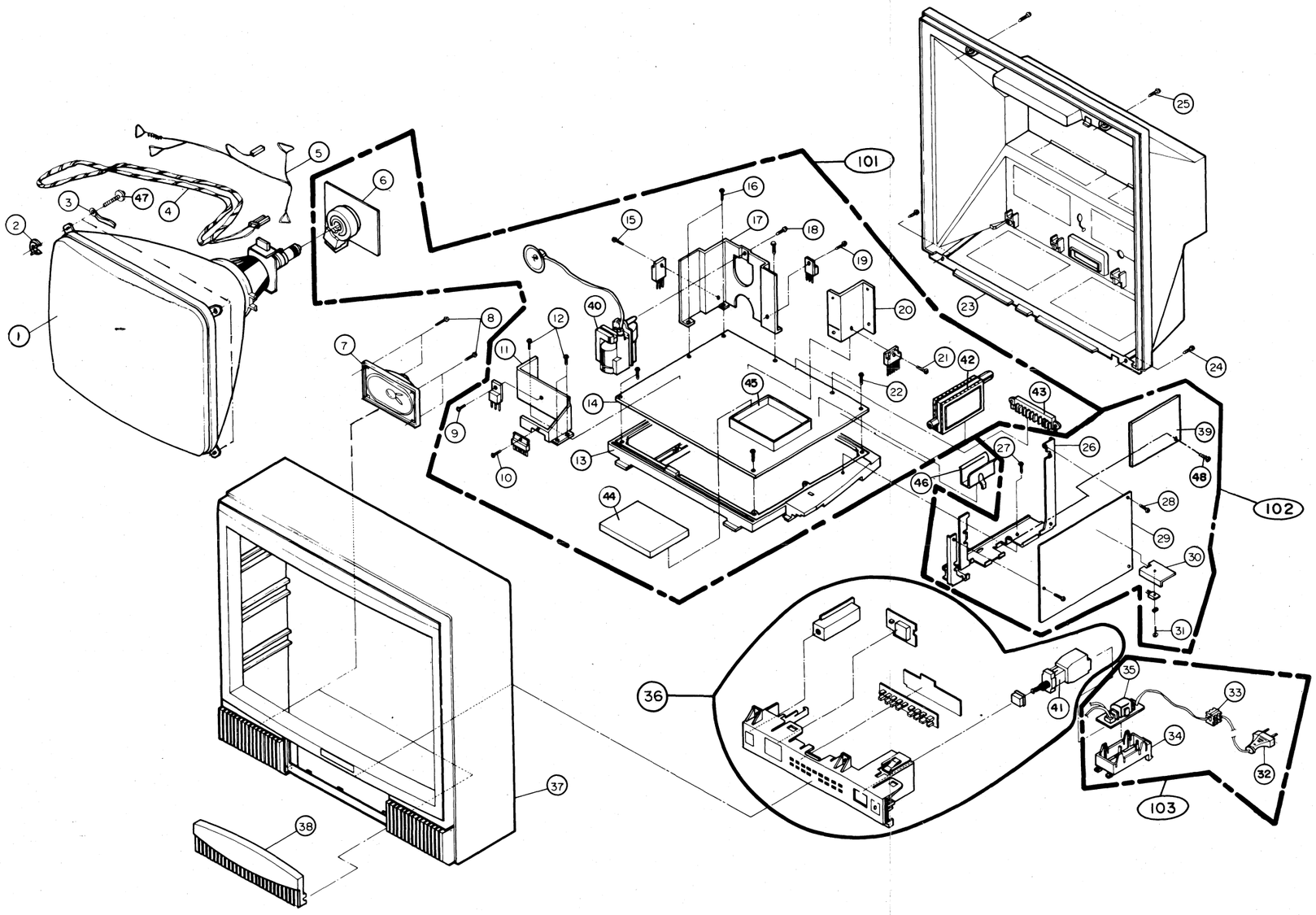
SP: Serviceable Parts
NSP: Not Serviceable Parts

NO.	DESCRIPTION	Q'TY	PART NO.	REMARKS
1	CPT, A51-EAL00X02 FST	1	112-A86A	SP
2	WASHER, CPT FIXING	4	334-039C	SP
3	HOLDER ASSY, METAL	4	341-480A	SP
4	COIL, DEGAUSSING 21″ FST	1	150-438E	SP
5	LEAD SET, CPT EARTH 21″ FST	1	170-586V	SP
6	PCB ASSY, CPT	1	110-A31C	SP
7	SPEAKER, CO091A06K1452	1	120-089F	SP
8	SCREW, RTS1 +3 ×16	4	03281006	SP
9	SCREW, TAP-TITE C TYPE	1	332-069D	SP
10	SCREW, TAP-TITE C TYPE	1	332-069B	SP
11	PLATE, HEAT SINK	1	407-757A	NSP
12	SCREW, RTS1 +3 ×12	3	03281004	SP
13	FRAME, MAIN	1	312-200A	SP
14	PCB ASSY, MAIN	1	110-C54A	SP
15	SCREW, TAP-TITE C TYPE	1	332-069D	SP
16	SCREW, RTS1 +3 ×12	3	03281004	SP
17	PLATE, HEAT SINK	1	407-755A	NSP
18	SCREW, RTS1 +3 ×12	1	03281004	SP
19	SCREW, TAP-TITE C TYPE	1	332-069D	SP
20	PLATE, HEAT SINK	1	407-756A	NSP
21	SCREW, TAP-TITE C TYPE	1	332-069D	SP
22	SCREW, WASHER	5	332-067C	SP
23	COVER ASSY, BACK	1	303-A34A	SP
24	SCREW, TTS2 +4 ×23A	2	03230307	SP
25	SCREW, TTS1 +4 ×16	2	03232305	SP
26	SUPPORTER, FS	1	343-627B	SP
27	SCREW, TTS1 +4 ×14	1	03232304	SP
28	SCREW, RTS2 +3 ×8A	3	03220202	SP
29	PCB ASSY, FS	1	110-A44B	SP
30	METAL, HEAT SINK	1	430-302C	SP
31	SCREW, RTS2 + 3 × 8A	1	03220202	SP
32	CORD, POWER	1	174-003L	SP
33	HOLDER, POWER CORD	1	341-259F	SP
34	BRACKET, LINE FILTER	1	340-206A	SP
35	PCB ASSY, LINE FILTER	1	110-C49A	SP
36	SWITCH ASSY, PACK	1	140-195A	SP
37	CABINET ASSY	1	300-685A	SP
38	DOOR ASSY, CONTROL	1	315-265A	SP
39	HNW610	4	03120105	SP
40	FBT	1	154-125C	SP
41	SWITCH, MAIN 70060-045	1	140-134B	SP
42	TUNER	1	113-139A	SP
43	SOCKET ASSY, 21PIN PERI-SOCKET	1	381-090A	SP
44	COVER, SHIELD	1	303-940B	SP
45	CASE, SHIELD	1	302-338B	SP

SUB ASSY

101	CHASSIS ASSY, MAIN	1	309-204B	SP
102	BOARD ASSY, FS	1	401-153B	NSP
103	BRACKET ASSY, LINE FILTER	1	340-207A	SP

(CBT-2172E)



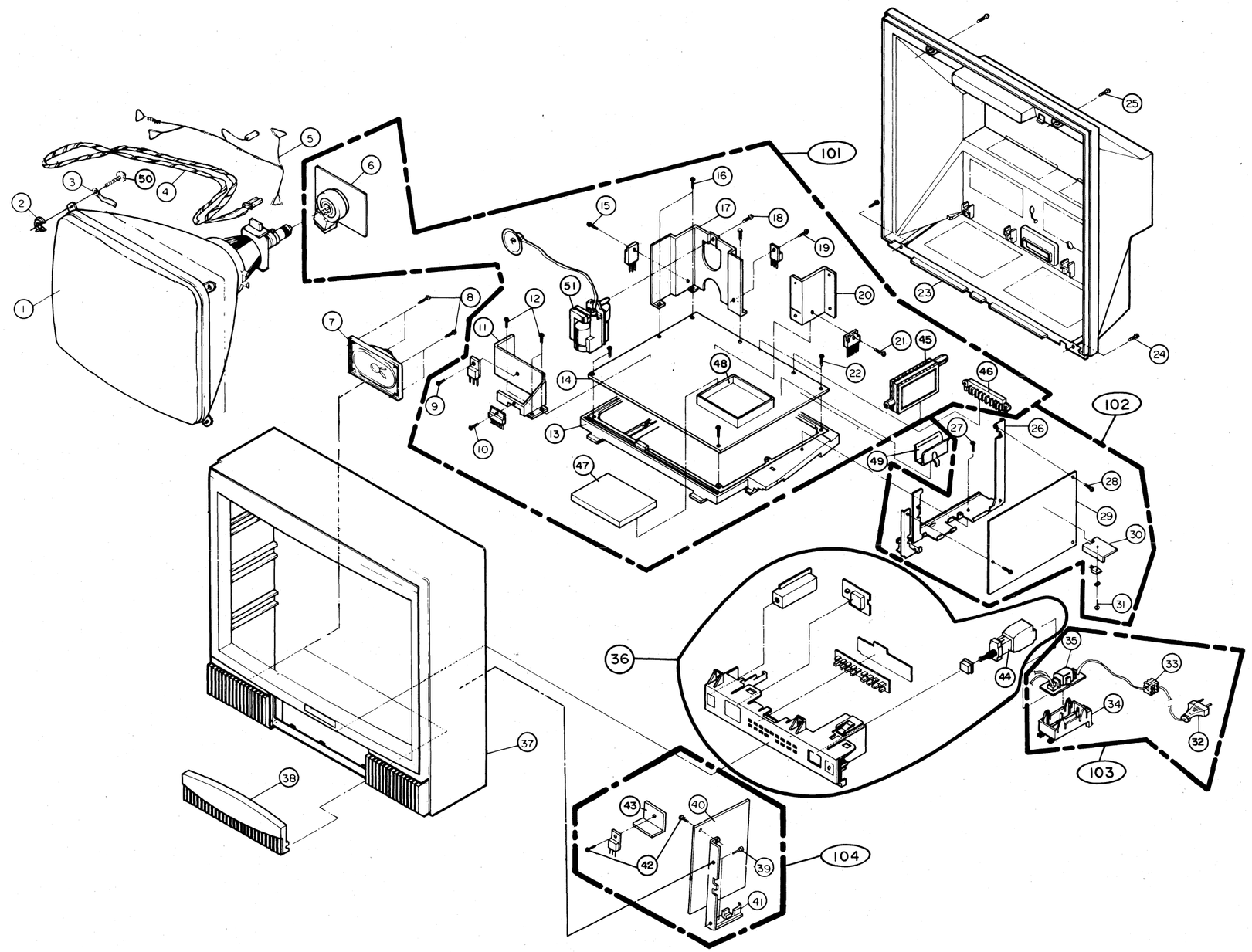
SP: Serviceable Parts
NSP: Not Serviceable Parts

NO.	DESCRIPTION	Q'TY	PART NO.	REMARKS
1	CPT, A51EAL 30X02 FST	1	112-A86B	SP
2	WASHER, CPT FIXING	4	334-039C	SP
3	HOLDER ASSY, METAL	4	341-480A	SP
4	COIL, DEGAUSSING 21" FST	1	150-438E	SP
5	LEAD SET ASSY, CPT EARTH 21" FST	1	170-758E	SP
6	PCB ASSY, CPT	1	110-A31C	SP
7	SPEAKER, C091P03K1453	1	120-180D	SP
8	SCREW, RTS1 +3 ×16	4	03281006	SP
9	SCREW, TAP-TITE C TYPE	1	332-069D	SP
10	SCREW, TAP-TITE C TYPE	1	332-069B	SP
11	PLATE, HEAT SINK	1	407-757A	NSP
12	SCREW, RTS1 +3 ×12	3	03281004	SP
13	FRAME, MAIN	1	312-200A	SP
14	PCB ASSY, MAIN	1	110-C54H	SP
15	SCREW, TAP-TITE C TYPE	1	332-069D	SP
16	SCREW, RTS1 +3 ×12	3	03281004	SP
17	PLATE, HEAT SINK	1	407-755A	NSP
18	SCREW, RTS1 +3 ×12	1	03281004	SP
19	SCREW, TAP-TITE C TYPE	1	332-069D	SP
20	PLATE, HEAT SINK	1	407-756A	NSP
21	SCREW, TAP-TITE C TYPE	1	332-069D	SP
22	SCREW, WASHER	5	332-067C	SP
23	COVER ASSY, BACK	1	303-B06A	SP
24	SCREW, TTS2 +4 ×24A	2	03230308	SP
25	SCREW, TTS1 +4 ×16	2	03232305	SP
26	SUPPORTER, FS AND SECAM	1	343-627B	SP
27	SCREW, TTS1 +4 ×14	1	03232304	SP
28	SCREW, RTS2 +3 ×8A	3	03220202	SP
29	PCB ASSY, FS	1	110-A44P	SP
30	METAL, HEAT SINK	1	430-302C	SP
31	SCREW, RTS1 +3 ×8A	1	03220202	SP
32	CORD, POWER	1	174-003L	SP
33	HOLDER, POWER CORD	1	341-259F	SP
34	BRACKET, LINE FILTER	1	340-206A	SP
35	PCB ASSY, LINE FILTER	1	110-C49A	SP
36	SWITCH ASSY, PACK	1	140-195A	SP
37	CABINET ASSY	1	300-558B	SP
38	DOOR ASSY, CONTROL	1	315-265A	SP
39	PCB ASSY, SECAM	1	110-B48H	SP
40	FBT	1	154-125C	SP
41	SWITCH, MAIN	1	140-134B	SP
42	TUNER, VTS-1SDHP	1	113-139A	SP
43	SOCKET ASSY, 21PIN PERI-SOCKET	1	381-090A	SP
44	COVER, SHIELD	1	303-940B	SP
45	CASE, SHIELD	1	302-338B	SP
46	METAL, FIXING	1	430-122A	SP
47	HNW610	4	03120105	SP
48	SCREW, RTS2 +3 ×8A	1	03220202	SP

SUB ASSY

101	CHASSIS ASSY, MAIN	1	309-705B	SP
102	BOARD ASSY, FS	1	401-502A	NSP
103	BRACKET ASSY, LINE FILTER	1	340-207A	SP

(CBT-2172X)



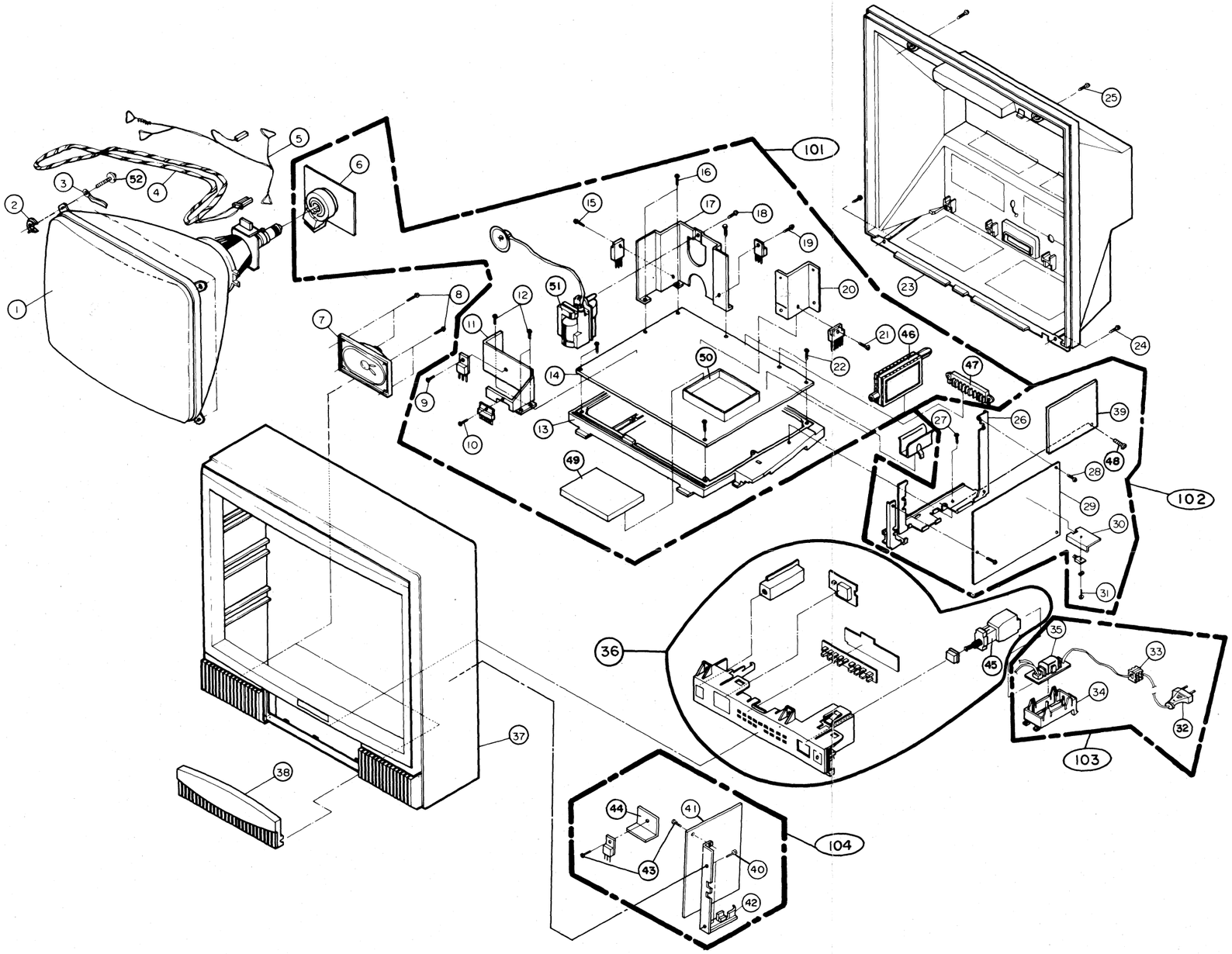
SP: Serviceable Parts
NSP: Not Serviceable Parts

NO.	DESCRIPTION	Q'TY	PART NO.	REMARKS
1	CPT, A51-EAL00X02 FST	1	112-A86A	SP
2	WASHER, CPT FIXING	4	334-039C	SP
3	HOLDER ASSY, METAL	4	341-480A	SP
4	COIL, DEGAUSSING 21″ FST	1	150-438E	SP
5	LEAD SET, CPT EARTH 21″ FST	1	170-586V	SP
6	PCB ASSY, CPT	1	110-A31C	SP
7	SPEAKER, CO091A06K1452	1	120-089F	SP
8	SCREW, RTS1 +3 ×16	4	03281006	SP
9	SCREW, TAP-TITE C TYPE	1	332-069D	SP
10	SCREW, TAP-TITE C TYPE	1	332-069B	SP
11	PLATE, HEAT SINK	1	407-757A	NSP
12	SCREW, RTS1 +3 ×12	3	03281004	SP
13	FRAME, MAIN	1	312-200A	SP
14	PCB ASSY, MAIN	1	110-C54D	SP
15	SCREW, TAP-TITE C TYPE	1	332-069D	SP
16	SCREW, RTS1 +3 ×12	3	03281004	SP
17	PLATE, HEAT SINK	1	407-755A	NSP
18	SCREW, RTS1 +3 ×12	1	03281004	SP
19	SCREW, TAP-TITE C TYPE	1	332-069D	SP
20	PLATE, HEAT SINK	1	407-756A	NSP
21	SCREW, TAP-TITE C TYPE	1	332-069D	SP
22	SCREW, WASHER	5	332-067C	SP
23	COVER ASSY, BACK	1	303-A34A	SP
24	SCREW, TTS2 +4 ×23A	2	03230307	SP
25	SCREW, TTS1 +4 ×16	2	03232305	SP
26	SUPPORTER, FS	1	343-627B	SP
27	SCREW, TTS1 +4 ×14	1	03232304	SP
28	SCREW, RTS2 +3 ×8A	3	03220202	SP
29	PCB ASSY, FS	1	110-A44F	SP
30	METAL, HEAT SINK	1	430-302C	SP
31	SCREW, RTS1 +3 ×8A	1	03220202	SP
32	CORD, POWER	1	174-003L	SP
33	HOLDER, POWER CORD	1	341-259F	SP
34	BRACKET, LINE FILTER	1	340-206A	SP
35	PCB ASSY, LINE FILTER	1	110-C49A	SP
36	SWITCH ASSY, PACK	1	140-195C	SP
37	CABINET ASSY	1	300-685B	SP
38	DOOR ASSY, CONTROL	1	315-265A	SP
39	SCREW, TTS1 +4 ×14	2	03232304	SP
40	PCB ASSY, TXT (PC07X2)	1	110-C12A	SP
41	SUPPORTER, TXT	1	343-641A	SP
42	SCRWE, RTS2 +3 ×8A	2	03220202	SP
43	METAL, HEAT SINK	1	430-302C	SP
44	SWITCH, MAIN	1	140-134B	SP
45	TUNER	1	113-139A	SP
46	SOCKET ASSY, 21PIN PERI-SOCKET	1	381-090A	SP
47	COVER, SHIELD	1	303-940B	SP
48	CASE, SHIELD	1	302-338B	SP
49	METAL, FIXING	1	430-122A	SP
50	HNW610	1	03120105	SP
51	FBT	1	154-125C	SP

SUB ASSY

101	CHASSIS ASSY, MAIN	1	309-204F	SP
102	BOARD ASSY, FS	1	401-158E	SP
103	BRACKET ASSY, LINE FILTER	1	340-207A	SP
104	BOARD ASSY, TXT	1	401-147G	SP

(CBT-2172M)



SP: Serviceable Parts
NSP: Not Serviceable Parts

NO.	DESCRIPTION	Q'TY	PART NO.	REMARKS
1	CPT, A51-EAL00X02 FST	1	112-A86A	SP
2	WASHER, CPT FIXING	4	334-039C	SP
3	HOLDER ASSY, METAL	4	341-480A	SP
4	COIL, DEGAUSSING 21" FST	1	150-438E	SP
5	LEAD SET, CPT EARTH 21" FST	1	170-586V	SP
6	PCB ASSY, CPT	1	110-A31C	SP
7	SPEAKER, C091P03K1453	1	120-180D	SP
8	SCREW, RTS1 +3 ×16	4	03281006	SP
9	SCREW, TAP-TITE C TYPE	1	332-069D	SP
10	SCREW, TAP-TITE C TYPE	1	332-069B	SP
11	PLATE, HEAT SINK	1	407-757A	NSP
12	SCREW, RTS1 +3 ×12	3	03281004	SP
13	FRAME, MAIN	1	312-200A	SP
14	PCB ASSY, MAIN	1	110-C54E	SP
15	SCREW, TAP-TITE C TYPE	1	332-069D	SP
16	SCREW, RTS1 +3 ×12	3	03281004	SP
17	PLATE, HEAT SINK	1	407-755A	NSP
18	SCREW, RTS1 +3 ×12	1	03281004	SP
19	SCREW, TAP-TITE C TYPE	1	332-069D	SP
20	PLATE, HEAT SINK	1	407-756A	NSP
21	SCREW, TAP-TITE C TYPE	1	332-069D	SP
22	SCREW, WASHER	5	332-067C	SP
23	COVER, ASSY, BACK	1	303-A34A	SP
24	SCREW, TTS2 +4 ×24A	2	03230308	SP
25	SCREW, TTS1 +4 ×16	2	03232305	SP
26	SUPPORTER, FS AND SECAM	1	343-627B	SP
27	SCREW, TTS1 +4 ×14	1	03232304	SP
28	SCREW, RTS2 +3 ×8A	3	03220202	SP
29	PCB ASSY, FS	1	110-A44C	SP
30	METAL, HEAT SINK	1	430-302C	SP
31	SCREW, RTS1 +3 ×8A	1	03220202	SP
32	CORD, POWER	1	174-003L	SP
33	HOLDER, POWER CORD	1	341-259F	SP
34	BRACKET, LINE FILTER	1	340-206A	SP
35	PCB ASSY, LINE FILTER	1	110-C49A	SP
36	SWITCH ASSY, PACK	1	140-195C	SP
37	CABINET ASSY	1	300-685B	SP
38	DOOR ASSY, CONTROL	1	315-265A	SP
39	PCB ASSY, SECAM	1	110-B48A	SP
40	SCREW, TTS1 +4 ×14	2	03232304	SP
41	PCB ASSY, TXT(PC07X2)	1	110-C12A	SP
42	SUPPORTER, TXT	1	343-641A	SP
43	SCREW, RTS2 +3 ×8A	2	03220202	SP
44	METAL, HEAT SINK	1	430-302C	SP
45	SWITCH, MAIN	1	140-134B	SP
46	TUNER	1	113-139A	SP
47	SOCKET ASSY, 21PIN PERI-SOCKET	1	381-090A	SP
48	SCREW, RTS2 +3 ×8A	1	03220202	SP
49	COVER, SHIELD	1	303-940B	SP
50	CASE, SHIELD	1	302-338B	SP
51	FBT	1	154-125C	SP
52	HNW610	4	03120105	SP

SUB ASSY

101	CHASSIS ASSY, MAIN	1	309-204G	SP
102	BOARD ASSY, FS	1	401-158D	SP
103	BRACKET ASSY, LINE FILTER	1	340-207A	SP
104	BOARD ASSY, TXT	1	401-147G	SP

REPLACEMENT PARTS LIST

CAUTION: Before replacing any of these components, read carefully the "SAFETY PRECAUTIONS" on page 3. Do not degrade the safety of the receiver through improper servicing.

ABBREVIATIONS: Capacitors ..... CC: Ceramic (TC), MYL: Mylar, CE: Electrolytic, CK: Ceramic (Hi-K)
PP: Polypropylene film MPP: Metal Polypropylene film MPE: Metal Polyester film
Resistors ..... RD: Carbon film, RS: Metal Oxide film, RN: Metal film, RV: Variable or Semifix

NOTE: 1. All Capacitors are ±20%, 50Volts and all resistor, ±5%, 1/8W unless otherwise noted.
2. SP marked parts at the remarks mean the parts which are the serviceable parts.
NSP marked parts at the remarks mean the parts which are not serviceable parts.

NOTE: *Since this is a basic parts list, the value of components are subject to be changed for improvement.*

1. ASSEMBLED P.C.BOARD (BASIC MODEL: CBT-2172)

NO. ON BOARD	ASSEMBLY PART NO.	DESCRIPTION	RE-MARKS
111-872B	110-C54A	PCB ASSY, MAIN	SP
111-871A	110-A31C	PCB ASSY, CPT	SP
111-A05A	110-C49A	PCB ASSY, LINE FILTER	SP
111-873F	110-A44B	PCB ASSY, FS	SP

2. MAIN P.C.BOARD (110-C54A)

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
		RESISTOR	
R101	01157081	RD, 220 ohm	SP
R103	01157115	RD, 5.6K ohm	SP
R104	01157097	RD, 1K ohm	SP
R105	01157055	RD, 18 ohm	SP
R106	01157055	RD, 18 ohm	SP
R107	01157065	RD, 47 ohm	SP
R201	01157113	RD, 4.7K ohm	SP
R202	01157105	RD, 2.2K ohm	SP
R203	01157171	RD, 1.2M ohm	SP
R204	01157109	RD, 3.3K ohm	SP
R205	01157103	RD, 1.8K ohm	SP
R206	01157081	RD, 220 ohm	SP
R207	01157066	RD, 51 ohm	SP
R208	01157113	RD, 4.7K ohm	SP
R209	01157133	RD, 33K ohm	SP
R210	01157102	RD, 1.6K ohm	SP
R211	01157197	RD, 1K ohm	SP
R213	01157137	RD, 47K ohm	SP
R214	01157167	RD, 820K ohm	SP
R215	01157133	RD, 33K ohm	SP
R216	01157157	RD, 330K ohm	SP
R218	01157099	RD, 1.2K ohm	SP
R219	01157141	RD, 68K ohm	SP
R220	01157132	RD, 30K ohm ±5%	SP
R221	01157143	RD, 82K ohm	SP
R222	01157101	RD, 1.5K ohm	SP
R223	01157099	RD, 1.2K ohm	SP
R224	01157143	RD, 82K ohm	SP
R225	01157143	RD, 82K ohm	SP
R226	01157145	RD, 100K ohm	SP
R227	01157145	RD, 100K ohm	SP
R231	01157087	RD, 390 ohm	SP
R232	01157057	RD, 22 ohm	SP
R233	180-140C	Fusible, 10 ohm 1/2W	SP
R236	01157057	RD, 22 ohm	SP
R239	01157121	RD, 10K ohm	SP
R301	01157105	RD, 2.2K ohm	SP
R302	01157049	RD, 10 ohm	SP
R303	01157129	RD, 22K ohm	SP
R304	01157137	RD, 47K ohm	SP
R305	01157129	RD, 22K ohm	SP
R306	01516033	RD, 2.2 ohm 1/2W	SP
R307	01157083	RD, 270 ohm 1/2W	SP
R308	01154099	RD, 1.2K ohm 1/2W	SP
R309	01154099	RD, 1.2K ohm 1/2W	SP
R401	01157081	RD, 220 ohm	SP
R402	01157111	RD, 3.9K ohm	SP
R403	01154101	RD, 1.5K ohm 1/2W	SP
R404	01332081	RS, 220 ohm 1W	SP
R405	01325079	RS, 180 ohm 1/2W	SP
R406	01325105	RS, 2.2K ohm 1/2W	SP
R502	01157101	RD, 1.5K ohm	SP
R503	01157070	RD, 75 ohm	SP
R504	01157094	RD, 750 ohm	SP
R505	01157095	RD, 820 ohm	SP
R507	01157089	RD, 470 ohm	SP
R508	01157097	RD, 1K ohm	SP
R509	01157167	RD, 820K ohm	SP
R510	01157099	RD, 1.2K ohm	SP
R511	01157087	RD, 390 ohm	SP
R515	01157139	RD, 56K ohm	SP
R516	01157125	RD, 15K ohm	SP
R517	01157135	RD, 39K ohm	SP
R518	01157119	RD, 8.2K ohm	SP
R519	01157141	RD, 68K ohm	SP
R520	01157125	RD, 15K ohm	SP
R521	01157132	RD, 30K ohm	SP
R522	01157132	RD, 30K ohm	SP
R523	01157132	RD, 30K ohm	SP
R526	01157133	RD, 33K ohm	SP
R527	01157102	RD, 1.6K ohm	SP
R601	01157091	RD, 560 ohm	SP
R603	01157091	RD, 560 ohm	SP
R604	01157129	RD, 22K ohm	SP
R605	01157129	RD, 22K ohm	SP
R606	01157097	RD, 1K ohm	SP
R607	01157097	RD, 1K ohm	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
R608	01157121	RD, 10K ohm	SP
R609	01157111	RD, 3.9K ohm	SP
R610	01157121	RD, 10K ohm	SP
R611	01157102	RD, 1.6K ohm	SP
R613	01157145	RD, 100K ohm	SP
R614	01157137	RD, 47K ohm	SP
R615	01157097	RD, 1K ohm	SP
R616	01157033	RD, 2.2 ohm	SP
R617	01157123	RD, 12K ohm	SP
R618	01154069	RD, 68 ohm 1/2W	SP
R619	01157073	RD, 100 ohm	SP
R620	01157113	RD, 4.7K ohm	SP
R621	01157106	RD, 2.4K ohm	SP
R622	01157113	RD, 4.7K ohm	SP
R623	01157113	RD, 4.7K ohm	SP
R701	01154099	RD, 1.2K ohm 1/2W	SP
R702	01157150	RD, 160K ohm	SP
R703	01157139	RD, 56K ohm	SP
R705	01157097	RD, 1K ohm	SP
R706	01157127	RD, 18K ohm	SP
R707	01157144	RD, 91K ohm	SP
R715	01157097	RD, 1K ohm	SP
R801	180-142V	RWR, 4.7 ohm 5W	SP
R802	01518021	RN, 0.68 ohm	SP
R804	180-142D	RWR, 47 ohm 5W	SP
R805	01157117	RD, 6.8K ohm	SP
R806	01157155	RD, 270K ohm	SP
R807	01157155	RD, 270K ohm	SP
R808	01157114	RD, 5.1K ohm	SP
R809	01157133	RD, 33K ohm	SP
R810	01157125	RD, 15K ohm	SP
R811	01157121	RD, 10K ohm	SP
R812	01157099	RD, 1.2K ohm	SP
R813	01157080	RD, 200 ohm	SP
R814	01332073	RS, 100 ohm 1W	SP
R815	01325107	RS, 2.7K ohm 1/2W	SP
⚠ R816	180-042B	COMP GF, 4.7M ohm 1/2W	SP
R817	01332137	RS, 47K ohm 1W	SP
R818	01332040	RS, 4.3 ohm 1W	SP
VR201	180-021D	RV, SR-19R 22KB	SP
VR202	180-021C	RV, SR-19R 4.7KB	SP
VR203	180-021L	RV, SR-19R 47KB	SP
VR301	180-021N	RV, SR-19R 220B	SP
VR302	180-021C	RV, SR-19R 4.7KB	SP
VR501	180-021A	RV, SR-19R 1KB	SP
VR502	180-021H	RV, SR-19R 10KB	SP
VR801	180-021C	RV, SR-19R 4.7KB	SP
⚠ FR701	180-286A	Fusible, 2.2 ohm 1/2W	SP
⚠ FR702	180-1407	Fusible, 0.47 ohm 1/2W	SP
⚠ FR703	180-1407	Fusible, 0.47 ohm 1/2W	SP
FR801	180-1407	Fusible, 0.47 ohm 1/2W	SP
FR802	180-1407	Fusible, 0.47 ohm 1/2W	SP
		CAPACITOR	
C101	08200972	CK, 0.01uF +80%, −20%	SP
C102	08200972	CK, 0.01uF +80%, −20%	SP
C103	08300110	CC, 8pF ± 0.5P	SP
C104	08300110	CC, 8pF ± 0.5P	SP
C105	08700337	MYL, 0.1uF/100V ±10%	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
C106	08200972	CK, 0.01uF +80%, −20%	SP
C107	08110507	CE, 1uF	SP
C108	08110507	CE, 1uF	SP
C109	08700337	MYL, 0.1uF/100V ±10%	SP
C110	08110511	CE, 4.7uF	SP
C111	08110313	CE, 10uF/16V	SP
C201	08200972	CK, 0.01uF +80%, −20%	SP
C202	181-155A	MR, 0.22uF/100V	SP
C203	08200760	CK, 0.001uF ±10%	SP
C204	08110313	CE, 10uF/16V	SP
C205	02140323	CE, 470uF/16V	SP
C206	08200760	CK, 0.001uF ±10%	SP
C207	02140321	CE, 220uF/16V	SP
C208	08200760	CK, 0.001uF ±10%	SP
C209	08700337	MYL, 0.1uF/100V ±10%	SP
C210	08700337	MYL, 0.1uF/100V ±10%	SP
C211	08110503	CE, 0.22uF	SP
C212	08300728	CC, 47pF ±5%	SP
C213	08110505	CE, 47uF	SP
C214	181-074N	PSR, 0.0027uF ±5%	SP
C215	08200973	CK, 0.022uF +80%, −20%	SP
C216	02705333	MYL, 0.022uF/100V ±10%	SP
C217	08110313	CE, 10uF/16V	SP
C218	08300144	CC, 220pF ±5%	SP
C219	181-064J	CE, BP 0.47uF/50V	SP
C221	08700337	MYL, 0.1uF/100V ±10%	SP
C222	02140323	CE, 470uF/16V	SP
C223	08110323	CE, 470uF/16V	SP
C224	02100407	CE, 1uF/25V	SP
C230	08110319	CE, 100uF/16V	SP
C301	08700337	MYL, 0.1uF/100V ±10%	SP
C302	08200760	CK, 0.001uF ±10%	SP
C303	08702423	MYL, 0.0022uF/100V ±5%	SP
C304	08200760	CK, 0.001uF ±10%	SP
C305	181-081G	CE, 100uF/35V	SP
C306	02140423	CE, 470uF/25V	SP
C307	181-112C	CE, 1uF	SP
C308	02140327	CE, 0.0022uF/16V	SP
C309	08700337	MYL, 0.1uF/100V ±10%	SP
C310	181-112D	CE, 0.47uF	SP
C401	08300147	CC, 330pF ±5%	SP
C402	02140421	CE, 220uF/25V	SP
C403	08705336	MYL, 0.068uF/100V ±10%	SP
⚠ C404	181-131B	MPP, 0.0082uF/1.6KV ±5%	SP
C405	08110707	CE, 1uF/160V	SP
C406	181-059W	PP, 0.39uF/200V ±5%	SP
C501	08110317	CE, 47uF/16V	SP
C502	08200760	CK, 0.001uF ±10%	SP
C503	08110503	CE, 0.22uF	SP
C504	08200972	CK, 0.01uF +80%, −20%	SP
C505	08700337	MYL, 0.1uF/100V ±10%	SP
C506	08110509	CE, 2.2uF	SP
C507	08110509	CE, 2.2uF	SP
C508	08110315	CE, 22uF/16V	SP
C509	08700337	MYL, 0.1uF/100V ±10%	SP
C510	08300724	CC, 33pF ±5%	SP
C511	08110511	CE, 4.7uF	SP
C515	08110507	CE, 1uF	SP
C516	08110507	CE, 1uF	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
C517	08110507	CE, 1uF	SP
C518	08200760	CK, 0.001uF ±10%	SP
C519	08200760	CK, 0.001uF ±10%	SP
C520	08700337	MYL, 0.1uF/100V ±10%	SP
C521	08110509	CE, 2.2uF	SP
C522	08700337	MYL, 0.1uF/100V ±10%	SP
C523	08300114	CC, 12pF ±5%	SP
C524	08200972	CK, 0.01uF +80%, −20%	SP
C525	02140323	CE, 470uF/16V	SP
C526	08300732	CC, 68pF ±5%	SP
C527	08300147	CC, 330pF ±5%	SP
C601	08200972	CK, 0.01uF +80%, −20%	SP
C602	08200972	CK, 0.01uF +80%, −20%	SP
C603	08200972	CK, 0.01uF +80%, −20%	SP
C604	08300110	CC, 8pF ±0.5P	SP
C605	08700335	MYL, 0.047uF/100V ±10%	SP
C607	08110507	CE, 1uF	SP
C608	08110507	CE, 1uF	SP
C610	08200972	CK, 0.01uF +80%, −20%	SP
C611	181-155A	MR, 0.22uF/100V	SP
C612	08110507	CE, 1uF	SP
C613	02140323	CE, 470uF/16V	SP
C614	08110509	CE, 2.2uF	SP
C615	02140421	CE, 220uF/25V	SP
C617	08110507	CK, 1uF	SP
C618	08110511	CE, 4.7uF	SP
C701	08201046	CK, 270pF/500V ±10%	SP
C703	08201046	CK, 270pF/500V ±10%	SP
C704	02140419	CE, 100uF/25V	SP
C705	08201046	CK, 270pF/500V ±10%	SP
C706	02140813	CE, 10uF/250V	SP
C707	08700335	MYL, 0.047uF/100V ±10%	SP
C708	08201060	CK, 0.001uF/500V ±10%	SP
C710	08110417	CE, 47uF/25V	SP
C711	08700337	MYL, 0.1uF/100V ±10%	SP
C801	02201364	CK, 0.0022uF/3KV ±10%	SP
C802	02201364	CK, 0.0022uF/3KV ±10%	SP
C803	02201364	CK, 0.0022uF/3KV ±10%	SP
C804	02201364	CK, 0.0022uF/3KV ±10%	SP
C805	181-124B	CE, 200uF/400V	SP
⚠ C806	02706528	MYL, 0.0056uF/100V ±10%	SP
C807	08300730	CC, 56pF ±5%	SP
⚠ C808	08110507	CE, 1uF	SP
C809	02701529	MYL, 0.0068uF/100V ±10%	SP
C810	08110507	CE, 1uF	SP
C811	08110416	CE, 33uF/25V	SP
C812	08110313	CE, 10uF/16V	SP
C813	08110319	CE, 100uF/16V	SP
⚠ C814	181-131E	MPP, 0.0022uF/2KV ±5%	SP
C815	08201046	CK, 270pF/500V ±10%	SP
C816	02140717	CE, 47uF/16V	SP
C817	02140717	CE, 47uF/16V	SP
C819	08110413	CE, 10uF/25V	SP
C820	02140323	CE, 470uF/16V	SP
C821	02140323	CE, 470uF/16V	SP
⚠ C822	181-157A	ECK-DNS 0.022uF	SP
⚠ C851	181-208A	ECQ-E 0.15uF/100V	SP
⚠ C852	181-208A	ECQ-E 0.15uF/100V	SP
⚠ C853	181-209A	ECQ-E 0.1uF/100V	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
COIL AND TRANSFORMER			
L101	150-167D	COIL, CHOKE 1.0uH	SP
L102	150-381B	COIL, ASC TRAP	SP
L202	04040025	PL2.2uH ±10%	SP
L203	04040045	PL15uH ±10%	SP
L204	150-164F	COIL, VIF DET	SP
L401	125-022B	CORE, FERRITE SM-2CRHW3.5 × 12 × 1B	NSP
L402	150-1096	COIL, PEAKING SPL 6800UH ±5%	SP
L403	150-224Q	COIL, LINEARITY	SP
L502	04040075	PL, 270uH ±10%	SP
L503	150-163G	COIL, MATRIX ADJ	SP
L504	04040043	PL, 12uH ±10%	SP
L505	04040041	PL, 10uH ±10%	SP
L601	150-164J	COIL, SIF DET	SP
L602	04040041	PL, 10uH ±10%	SP
L801	125-022B	CORE, FERRITE SM-2CRHW3.5 × 12 × 1B	NSP
L802	04040025	PL2.2uH ±10%	SP
L803	150-235A	COIL, H-CHOKE	SP
L805	150-166A	COIL, CHOKE 100UH ±10%	SP
⚠ L851	150-494A	COIL, LINE FILTER (2 × 27uH)	SP
⚠ L852	150-412C	COIL, LINE FILTER (500uH)	SP
DL501	150-377E	COIL, DELAY LINE	SP
DL502	175-013A	DELAY LINE 1H SD-11 P1D	SP
T401	151-116B	TRANS, H. DRIVE	SP
⚠ T701	154-125C	FBT	SP
⚠ T801	151-275A	TRANS, SMPS	SP
DIODE			
D201	06200226	1N4148TA	SP
D202	06200226	1N4148TA	SP
D301	06220070	1N4003TA	SP
D403	06220070	1N4003TA	SP
D501	06200226	1N4148TA	SP
D502	06200226	1N4148TA	SP
D503	06200226	1N4148TA	SP
D504	06200226	1N4148TA	SP
D506	06200226	1N4148TA	SP
D510	06200226	1N4148TA	SP
D601	06200226	1N4148TA	SP
D602	06200226	1N4148TA	SP
D603	06220228	ZENER, Z5.6BM TA	SP
D701	06200203	RU-1AV	SP
D702	06200287	ERB24-06D	SP
D703	06200203	RU-1AV	SP
D704	06200203	RU-1AV	SP
D801	06200124	1N4005GP	SP
D802	06200124	1N4005GP	SP
D803	06200124	1N4005GP	SP
D804	06200124	1N4005GP	SP
D805	06200203	RU-1AV	SP
D806	06200203	RU-1AV	SP
D807	06200203	RU-1AV	SP
D808	06200203	RU-1AV	SP
⚠ D809	06200255	DIODE GU3C	SP
D810	06200203	RU-1A	SP
D811	06200203	RU-1AV	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
D812	06200291	1N4933GP	SP
ZD701	167-006B	IC, KA33V	SP
ZD801	06220235	ZENER, Z11BL	SP
ZD802	06220240	ZENER, DZ18BL, TA	SP
REAR SIDE	06200226	1N4148	SP
		TRANSISTOR	
Q101	06120025	KTC388A	SP
Q201	06120169	KTC1815-Y	SP
Q202	06120169	KTC1815-Y	SP
Q204	06120169	KTC1815-Y	SP
Q401	06120162	KTC2229-Y	SP
⚠ Q402	06170030	2SD1911	SP
Q601	06100084	KTA1015-Y	SP
Q602	06120169	KTC1815-Y	SP
Q801	06120162	KTC2229-Y	SP
Q802	06170030	2SD1911	SP
		IC	
IC201	06300520	IC, TDA4502A	SP
IC301	06300360	IC, LA7830	SP
IC501	06300493	TDA3561A	SP
IC601	06300521	IC, TDA4190	SP
IC701	06300218	IC, GL7812	SP
IC801	06300323	IC, TDA4601	SP
		MISCELLANEOUS	
TUNER	113-139A	TUNER, VTS-1SD11P	SP
X501	156-007A	X-TAL, 8.867MHz	SP
Z101	166-191A	FILTER, SAW OFWG1956	SP
Z201	166-031B	CERAMIC TPS 5.5MB	SP
Z601	166-002D	CERAMIC SFE 5.5MB	SP
⚠ TH801	163-012A	PTH451A 02BG180 M290	SP
⚠ TH802	163-020A	PTC, Q63100-P2462-J29	SP
SW301	140-111A	SVC P12T21	SP
SW302	140-111A	SVC P12T21	SP
⚠ F851	131-027A	GLASS TUBE 3.15A/250	SP
P101	366-921L	WAFER IL-G12 (2,5S)	SP
P102	366-921A	WAFER IL-G (2,5S)	SP
P103	366-921B	WAFER IL-G3 (2,5S)	SP
P201	381-090A	SOCKET ASSY, 21 PIN PERI-SOCKET	SP
P401	366-033H	PIN, FLAT WAFER 6P	SP
P502	366-921D	WAFER IL-G5	SP
P601	366-921B	WAFER IL-G3	SP
P602	366-921B	WAFER IL-G3	SP
P701	366-921B	WAFER IL-G3	SP
P801	366-040A	PIN, MOLEX 5289-2A	SP
P802	366-043B	PIN ASSY, PLUG (2P)	SP

3. CPT P.C.BOARD (110-A31C)

		RESISTOR	
R901	01157073	RD, 100 ohm	SP
R902	01157073	RD, 100 ohm	SP
R903	01157073	RD, 100 ohm	SP
R904	01332123	RS, 12K ohm 1W	SP
R905	01332123	RS, 12K ohm 1W	SP
R906	01332123	RS, 12K ohm 1W	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
R907	01154107	RD, 2.7K ohm 1/2W	SP
R908	01154107	RD, 2.7K ohm 1/2W	SP
R909	01154107	RD, 2.7K ohm 1/2W	SP
R910	01157103	RD, 1.8K ohm	SP
R911	01157103	RD, 1.8K ohm	SP
R912	01157103	RD, 1.8K ohm	SP
R913	01157087	RD, 390 ohm	SP
R914	01157087	RD, 390 ohm	SP
R915	01157087	RD, 390 ohm	SP
R916	01157079	RD, 180 ohm	SP
R917	01157075	RD, 120 ohm	SP
VR901	180-021C	SR19R 4.7KB	SP
VR902	180-021C	SR19R 4.7KB	SP
VR903	180-021C	SR19R 4.7KB	SP
VR904	180-021F	SR19R 470B	SP
VR905	180-021F	SR19R 470B	SP
		CAPACITOR	
C901	08300146	CC, 270pF ±5%	SP
C902	08300146	CC, 270pF ±5%	SP
C903	08300142	CC, 180pF ±5%	SP
C904	08110317	CE, 47uF/16V	SP
C905	02201472	CK, 0.01uF/1KV +100% −0%	SP
		TRANSISTOR	
Q901	06120220	KTC2068	SP
Q902	06120220	KTC2068	SP
Q903	06120220	KTC2068	SP
		COIL	
L901	150-166A	COIL, CHOKE 10uH ±10%	SP
		MISCELLANEOUS	
P901	366-009B	PIN PLUG	SP
	381-094B	SOCKET, CPT HPS0360-01-020	SP

4. FS P.C.BOARD (110-A44B)

		RESISTOR	
R01	01157121	RD, 10K ohm	SP
R02	01157121	RD, 10K ohm	SP
R03	01157073	RD, 100 ohm	SP
R04	01157115	RD, 5.6K ohm	SP
R05	01157113	RD, 4.7K ohm	SP
R06	01157073	RD, 100 ohm 1/2W	SP
R10	01157121	RD, 10K ohm	SP
R11	01157075	RD, 120 ohm	SP
R15	01157113	RD, 4.7K ohm	SP
R16	01157121	RD, 10K ohm	SP
R18	01157129	RD, 22K ohm	SP
R19	01157129	RD, 22K ohm	SP
R20	01157095	RD, 820 ohm	SP
R21	01157107	RD, 2.7K ohm	SP
R22	01157121	RD, 10K ohm	SP
R23	01157121	RD, 10K ohm	SP
R24	01157121	RD, 10K ohm	SP
R25	01157121	RD, 10K ohm	SP
R26	01157121	RD, 10K ohm	SP
R27	01157121	RD, 10K ohm	SP
R28	01157119	RD, 8.2K ohm	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
R29	01157103	RD, 1.8K ohm	SP
R30	01157121	RD, 10K ohm	SP
R31	01157082	RD, 240 ohm	SP
R32	01160102	RD, 1.6K ohm ±2%	SP
R33	01160115	RD, 5.6K ohm ±2%	SP
R34	01157113	RD, 4.7K ohm	SP
R35	01157113	RD, 4.7K ohm	SP
R36	01157107	RD, 2.7K ohm	SP
R37	01157107	RD, 2.7K ohm	SP
R38	01157107	RD, 2.7K ohm	SP
R39	01157121	RD, 10K ohm	SP
R40	01157081	RD, 220 ohm	SP
R41	01157127	RD, 18K ohm	SP
R42	01157127	RD, 18K ohm	SP
R43	01157127	RD, 18K ohm	SP
R46	01157093	RD, 680 ohm	SP
R47	01157133	RD, 33K ohm	SP
R51	01157099	RD, 1.2K ohm	SP
R54	01157073	RD, 100 ohm	SP
R55	01157073	RD, 100 ohm	SP
R56	01157073	RD, 100 ohm	SP
R60	01157139	RD, 56K ohm	SP
R61	01157121	RD, 10K ohm	SP
R62	01157121	RD, 10K ohm	SP
R63	01157121	RD, 10K ohm	SP
R64	01157121	RD, 10K ohm	SP
R65	01157121	RD, 10K ohm	SP
R66	01157121	RD, 10K ohm	SP
R67	01157095	RD, 820 ohm	SP
R68	01157095	RD, 820 ohm	SP
R69	01157095	RD, 820 ohm	SP
R70	01157095	RD, 820 ohm	SP
R71	01157095	RD, 820 ohm	SP
R72	01157081	RD, 220 ohm	SP
R73	01157081	RD, 220 ohm	SP
R74	01157081	RD, 220 ohm	SP
R75	01157081	RD, 220 ohm	SP
R76	01157081	RD, 220 ohm	SP
R77	01157081	RD, 220 ohm	SP
R78	01157081	RD, 220 ohm	SP
R80	01157173	RD, 1.5M ohm	SP
R81	01157119	RD, 8.2K ohm	SP
R84	01157177	RD, 2.2M ohm	SP
		CAPACITOR	
C02	08110313	CE, 10uF/16V	SP
C03	02140323	CE, 470uF/16V	SP
C04	02140323	CE, 470uF/16V	SP
C05	08110317	CE, 47uF/16V	SP
C06	08200972	CK, 0.01uF +80%, −20%	SP
C07	08110515	CE, 22uF	SP
C08	08110313	CE, 10uF/16V	SP
C09	181-155C	MR, 0.47uF/100V	SP
C10	02706537	MYL, 0.1uF/100V ±10%	SP
C13	08110313	CE, 10uF/16V	SP
C14	08110313	CE, 10uF/16V	SP
C15	08110313	CE, 10uF/16V	SP
C17	08200760	CK, 0.001uF ±10%	SP
C18	08200972	CK, 0.01uF +80%, −20%	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
C19	08110515	CE, 22uF	SP
C20	08200972	CK, 0.01uF +80%, −20%	SP
C21	08200972	CK, 0.01uF +80%, −20%	SP
C22	181-222D	CE, 1000uF/16V	SP
C23	08300736	CC, 100pF ±5%	SP
C24	08300736	CC, 100pF ±5%	SP
C25	08200972	CK, 0.01uF +80%, −20%	SP
C26	08300723	CC, 30pF ±5%	SP
C27	08300723	CC, 30pF ±5%	SP
C28	08110507	CE, 1uF	SP
C29	08110507	CE, 1uF	SP
C30	08110507	CE, 1uF	SP
C31	08700337	MYL, 0.1uF/100V ±10%	SP
C33	08110315	CE, 22uF/16V	SP
C36	08700337	MYL, 0.1uF/100V ±10%	SP
C38	08200972	CK, 0.01uF +80%, −20%	SP
REAR SIDE	181-155C	MR, 0.47uF/100V	SP
		COIL	
L01	04040065	PL100uH ±10%	SP
		DIODE	
D06	06220178	ZENER HZ 4.7 CP TA	SP
		TRANSISTOR	
Q01	06100084	KTA1015-Y	SP
Q02	06120172	KTC1959-Y	SP
Q03	06120169	KTC1815-Y	SP
Q06	06100084	KTA1015-Y	SP
Q08	06100084	KTA1015-Y	SP
Q09	06100084	KTA1015-Y	SP
Q10	06100084	KTA1015-Y	SP
Q11	06100084	KTA1015-Y	SP
Q12	06120169	KTC1815-Y	SP
Q13	06100084	KTA1015-Y	SP
Q14	06100084	KTA1015-Y	SP
Q15	06100084	KTA1015-Y	SP
		IC	
IC01	06300511	IC, M3870MAB1	SP
IC02	06300502	IC, M206B1	SP
IC03	06300503	IC, M705B1	SP
IC04	06300505	IC, LS776C	SP
IC05	06300342	IC, GL7805	SP
IC06	06300504	IC, M710B1	SP
IC07	06300500	IC, L201B	SP
		MISCELLANEOUS	
X01	166-015B	RESONATOR, CSB500E	SP
X02	156-008B	X-TAL 4.000MHz	SP
P1	366-921L	WAFER, IL-G12	SP
P3	366-921G	WAFER, IL-G8	SP
P4	366-921D	WAFER, IL-G5	SP
P5	366-921B	WAFER, IL-G3	SP
P6	366-921B	WAFER, IL-G3	SP

5. LINE FILTER P.C.BOARD (110-C49A)

C891	181-126A	PME 271Y515	SP
C892	181-126A	PME 271Y515	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
L891	150-283A	COIL, LINE FILTER	SP
P1	174-093D	CORD ASSY, POWER	SP
P2	174-093D	CORD ASSY, POWER	SP
P3	366-040A	PIN MOLEX5289-2A	SP

6. MISCELLANEOUS

⚠ CPT	112-A86A	A51-EAL00X02 FST	SP
	120-089F	SPEAKER, CO091A06K 1452	SP
	140-195A	SWITCH ASSY, PACK	SP
	150-438E	COIL, DEGAUSSING	SP
	105-523B	TX ASSY, FS	SP
	482-874A	OWNER'S MANUAL	SP
	174-003L	CORD, POWER	SP
	121-001A	EARPHONE	SP
	374-898A	WRAP ASSY	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS

ADDITIONAL PARTS FOR CBT-2172X, CBT-2172E, CBT-2172M

1. ASSEMBLED P.C.BOARD

NO. ON BOARD	ASSEMBLY PART NO.	DESCRIPTION	RE-MARKS
111-872B	110-C54D	PCB ASSY, MAIN(CBT-2172X)	SP
111-950A	110-C12A	PCB ASSY, TXT(CBT-2172X/M)	SP
111-873B	110-A44F	PCB ASSY, FS(CBT-2172X)	SP
111-874B	110-B48H	PCB ASSY, SECAM(CBT-2172E)	SP
111-874B	110-B48A	PCB ASSY, SECAM(CBT-2172M)	SP
111-872D	110-C54H	PCB ASSY, MAIN(CBT-2172E)	SP
111-873E	110-A44P	PCB ASSY, FS(CBT-2172E)	SP
111-872D	110-C54E	PCB ASSY, MAIN(CBT-2172M)	SP
111-873F	110-A44C	PCB ASSY, FS(CBT-2172M)	SP

2. MAIN P.C.BOARD

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
CBT-2172X			
		RESISTOR	
R512	01157070	RD, 75 ohm	SP
R513	01157070	RD, 75 ohm	SP
R514	01157070	RD, 75 ohm	SP
R524	01157102	RD, 1.6K ohm	SP
R525	01157097	RD, 1K ohm	SP
R528	01157097	RD, 1K ohm	SP
		CAPACITOR	
C512	08700337	MYL, 0.1uF/100V ±10%	SP
C513	08700337	MYL, 0.1uF/100V ±10%	SP
C514	08700337	MYL, 0.1uF/100V ±10%	SP
		TRANSISTOR	
Q203	06120169	KTC1815-Y	SP
		MISCELLANEOUS	
P504	366-921G	WAFER IL-G8	SP
CBT-2172E/M			
		CAPACITOR	
C110	08110313	CE, 10uF/16V (CBT-2172E)	SP
C204	08110317	CE, 47uF/16V (CBT-2172E)	SP
C209	08110507	CE, 1uF	SP
C210	08110337	MYL, 0.1uF/100V ±10%	SP
C406	181-059V	PP, 0.47uF/200V	SP
C407	02201552	CK, 470pF/2KV ±10%	SP
C619	08200972	CK, 0.01uF +80% −20%	SP
C706	02140811	CE, 4.7uF/250V	SP
C708	08110511	CE, 4.7uF	SP
C712	08200972	CK, 0.01uF +80% −20%	SP
C713	08200972	CK, 0.01uF +80% −20%	SP
C809	02701527	MYL, 0.0047uF/100V ±10%	SP
C811	08110417	CE, 47uF/25V	SP
C817	02140712	CE, 6.8uF/160V	SP
C854	02201562	CK, 0.0015uF/2KV ±10%	SP
		RESISTOR	
R210	01157097	RD, 1K ohm	SP
R224	01157137	RD, 47K ohm	SP
R231	01157074	RD, 120 ohm	SP
R233	01157049	RD, 10 ohm 1/2W	SP
R239	01157121	RD, 10K ohm	SP
R305	01157125	RD, 15K ohm	SP
R505	01157101	RD, 1.5K ohm	SP
R615	01157095	RD, 820 ohm	SP
R705	01157097	RD, 1K ohm	SP
R803	01154167	RD, 820K ohm 1/2W	SP
J113	01157145	RD, 100K ohm	SP
REAR	180-1407	Fusible, 0.47ohm 1/2W	SP
		COIL AND TRANSFOMER	
L205	150-489F	COIL, 6.5M TRAP	SP
L504	04040045	PL, 15uH ±10%	SP
L506	04040041	PL, 10uH ±10%	SP
DL501	150-377G	COIL, DELAY LINE	SP
RL801	141-005B	RELAY, VS12MB	SP
T801	151-308A	TRANS, SMPS	SP
		DIODE	
D205	06200226	1N4148TA	SP
D813	06200226	1N4148TA	SP
REAR SIDE	06220227	ZENER Z5.1BTA	SP
		MISCELLANEOUS	
P503	366-921G	WAFER IL-G8	SP

3. F.S. P.C.BOARD

CBT-2172X			
R06	01157097	RD, 1K ohm	SP
R72-78	01157075	RD, 120 ohm	SP
C38	08200972	CK, 0.01uF +80% −20%	SP
Q2	06120169	KTC1815-Y	SP
IC01	06300660	IC, M3872MNB1	SP
P7	366-921B	WAFER IL-G3	SP
CBT-2172E			
R06	01154065	RD, 47 ohm 1/2W	SP
R11	01157075	RD, 120 ohm	SP
R47	01157131	RD, 27K ohm	SP
R72-78	01157075	RD, 120 ohm	SP
D01	01157121	RD, 10K ohm	SP
C10	181-155C	MR, 0.47uF/100V	SP
C40	02110323	CE, 470uF/16V	SP
C41	02110323	CE, 470uF/16V	SP
L02	04040083	PL, 560uH ±10%	SP
L03	04040083	PL, 560uH ±10%	SP
IC01	06300501	IC, M3870P	SP
CBT-2172M			
R47	01157131	RD, 27K ohm	SP
R51	01157119	RD, 8.2K ohm	SP
R72-78	01157075	RD, 120 ohm	SP
D01	01157121	RD, 10K ohm	SP
C40	02110323	CE, 470uF/16V	SP
C41	02110323	CE, 470uF/16V	SP
IC01	06300660	IC, M3872MNB1	SP
P7	366-921B	WAFER IL-G3	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS

4. SECAM P.C.BOARD (CBT-2172M)

		RESISTOR	
SR01	01157097	RD, 1K ohm	SP
SR02	01157087	RD, 390 ohm	SP
SR03	01157097	RD, 1K ohm	SP
SR04	01157093	RD, 680 ohm	SP
SR05	01157102	RD, 1.6K ohm	SP
SR06	01157104	RD, 2K ohm	SP
SR07	01157091	RD, 560 ohm	SP
SR08	01157102	RD, 1.6K ohm	SP
SR09	01157091	RD, 560 ohm	SP
SR10	01157097	RD, 1K ohm	SP
SR11	01157093	RD, 680 ohm	SP
SR12	01157102	RD, 1.6K ohm	SP
SVR1	180-021A	VR, SR-19R 1KB	SP
SVR2	180-021A	VR, SR-19R 1KB	SP
		CAPACITOR	
SC01	08700337	MYL, 0.1uF/100V ±10%	SP
SC02	08700736	CC, 100pF ±5%	SP
SC03	08700337	MYL, 0.1uF/100V ±10%	SP
SC04	08110505	CE, 0.47uF	SP
SC05	08110509	CE, 2.2uF	SP
SC06	08700337	MYL, 0.1uF/100V ±10%	SP
SC07	08200972	CK, 0.01uF +80% −20%	SP
SC08	08200760	CK, 0.001uF ±10%	SP
SC09	08200760	CK, 0.001uF ±10%	SP
SC10	08200760	CK, 0.001uF ±10%	SP
SC11	08700337	MYL, 0.1uF/100V ±10%	SP
SC12	08110315	CE, 22uF/16V	SP
SC13	08110507	CE, 1uF	SP
SC14	08300760	CK, 0.001uF ±10%	SP
SC15	08300734	CC, 82pF ±5%	SP
SC16	08700337	MYL, 0.1uF/100V ±10%	SP
SC17	08700337	MYL, 0.1uF/100V ±10%	SP
SC18	08300736	CC, 100pF ±5%	SP
SVC1	181-069B	TRIMMER	SP
		COIL	
SDL1	150-377E	COIL, Y-DELAY LINE	SP
SDL2	175-013A	DELAY LINE 1H SD-11 PID	SP
SL01	150-489B	COIL, SECAM BELL FILTER	SP
SL02	04040039	PL, 8.2uH ±10%	SP
SL03	150-489C	COIL, DELAY MATRIX ADJ	SP
SL04	150-489D	COIL, SECAM DEM	SP
SL05	04040031	COIL, PL, 3.7uH ±10%	SP
		IC	
SIC1	06300492	IC, TDA3592A	SP
		MISCELLANEOUS	
SX01	156-006A	OSC , X-TAL 4.43MHz	SP

5. SECAM P.C.BOARD (CBT-2172E)

		RESISTOR	
SR01	01157109	RD, 3.3K ohM	SP
SR02	01157087	RD, 390 ohm	SP
SR03	01157097	RD, 1K ohm	SP
SR04	01157093	RD, 680 ohm	SP
SR05	01157102	RD, 1.6K ohm	SP
SR06	01157104	RD, 2K ohm	SP
SR07	01157097	RD, 1K ohm	SP
SR08	01157097	RD, 1K ohm	SP
SR09	01157091	RD, 560 ohm	SP
SR10	01157103	RD, 1.8K ohm	SP
SR11	01157095	RD, 820 ohm	SP
SR12	01157102	RD, 1.6K ohm	SP
SVR1	180-021A	VR, SR-19R 1KB	SP
SVR2	180-021A	VR, SR-19R 1KB	SP
		CAPACITOR	
SC01	08700337	MYL, 0.1uF/100V ±10%	SP
SC02	08300736	CC, 100pF ±5%	SP
SC03	08700337	MYL, 0.1uF/100V ±10%	SP
SC04	08110505	CE, 0.47uF	SP
SC05	08110509	CE, 2.2uF	SP
SC06	08700337	MYL, 0.1uF/100V ±10%	SP
SC07	08200972	CK, 0.01uF +80% −20%	SP
SC08	08200760	CK, 0.001uF ±10%	SP
SC09	08200760	CK, 0.001uF ±10%	SP
SC10	08200760	CK, 0.001uF ±10%	SP
SC11	08700337	MYL, 0.1uF/100V ±10%	SP
SC12	08110315	CE, 22uF/16V	SP
SC13	08110507	CE, 1uF	SP
SC14	08300760	CK, 0.001uF ±10%	SP
SC15	08300734	CC, 82pF ±5%	SP
SC16	08700337	MYL, 0.1uF/100V ±10%	SP
SC17	08700337	MYL, 0.1uF/100V ±10%	SP
SC18	08300734	CC, 82pF ±5%	SP
SVC1	181-069B	TRIMMER	SP
		COIL	
SDL1	150-377F	COIL, Y-DELAY LINE	SP
SDL2	175-013A	DELAY LINE 1H-11P1D	SP
SL01	150-489B	COIL, SECAM BELL FILTER	SP
SL02	04040039	PL, 8.2uH	SP
SL03	150-489C	COIL, DELAY MATRIX ADJ	SP
SL04	150-489D	COIL, SECAM DEM	SP
SL05	04040031	COIL, PL, 3.7uH	SP
		IC	
SIC	06300492	IC, TDA3592A	SP
		MISCELLANEOUS	
SX01	156-006A	OSC , X-TAL 4.43MHz	SP

6. TXT P.C.BOARD (CBT-2172X/M)

		RESISTOR	
XR1	01157099	RD, 1.2K ohm	SP
XR2	01157139	RD, 56K ohm	SP
XR3	01157085	RD, 330 ohm	SP
XR4	01157089	RD, 470 ohm	SP
XR5	01157089	RD, 470 ohm	SP
XR6	01157089	RD, 470 ohm	SP
XR7	01157081	RD, 220 ohm	SP
XR8	01157041	RD, 4.7 ohm 1/2W	SP
XR9	01157089	RD, 470 ohm	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS
XR10	01157113	RD, 4.7K ohm	SP
XR11	01157089	RD, 470 ohm	SP
XR12	01157113	RD, 4.7K ohm	SP
XR13	01157099	RD, 1.2K ohm	SP
XR14	01157099	RD, 1.2K ohm	SP
XR15	01157099	RD, 1.2K ohm	SP
XR16	01157099	RD, 1.2K ohm	SP
		CAPACITOR	
XC1	02350716	CC, 15pF ±5%	SP
XC2	02706519	MYL, 0.001uF/100V ±10%	SP
XC3	02300152	CC, 470pF ±5%	SP
XC4	181-057B	PE, 0.022uF/100V	SP
XC5	02300146	CC, 270pF ±5%	SP
XC6	02300736	CC, 100pF ±5%	SP
XC7	02350716	CC, 15pF ±5%	SP
XC8	02300722	CC, 27p ±5%	SP
XC9	08200972	CK, 0.01uF +80%, −20%	SP
XC10	02350744	CC, 220pF ±5%	SP
XC11	08200972	CK, 0.01uF +80%, −20%	SP
XC12	08110509	CE, 2.2uF	SP
XC13	02706536	MYL, 0.068uF/100V ±10%	SP
XC14	02706535	MYL, 0.047uF/100V ±10%	SP
XC15	02300718	CC, 18pF ±5%	SP
XC16	02706535	MYL, 0.047uF/100V ±10%	SP
XC18	02140321	CE, 220uF/16V	SP
XC19	08110317	CE, 47uF/16V	SP
XC20	08200972	CK, 0.01uF +80%, −20%	SP
XC21	08200972	CK, 0.01uF +80%, −20%	SP
XC22	08110319.	CE, 100uF/16V	SP
XC23	02140321	CE, 220uF/16V	SP
XVC1	181-069B	TRIMMER	SP
		COIL	
XL1	04040045	PL, 15uh ±10%	SP
		TRANSISTOR	
XQ1	06120169	KTC1815-Y	SP
XQ2	06120169	KTC1815-Y	SP
XQ3	06120169	KTC1815-Y	SP
XQ4	06120169	KTC1815-Y	SP
		IC	
XIC1	06300713	IC, SAA5231	SP
XIC2	06300706	IC, SAA5243P/E	SP
XIC3	06300640	IC, GM76C28	SP
XIC4	06300342	IC, GL7805	SP
		MISCELLANEOUS	
XX1	156-007D	OSC. S-TAL 13.875 MHz	SP
XX2	150-007C	OSC. X-TAL 6.0 MHz	SP

7. MISCELLANEOUS

	105-523E	TRANSMITTER ASSY, TXT	SP
	482-874C	OWNER'S MANUAL(CBT-2172X)	SP
	482-874J	OWNER'S MANUAL(CBT-2172E)	SP
	482-874H	OWNER'S MANUAL(CBT-2172M)	SP
	140-195C	S/W ASSY, PACK(CBT-2172X)	SP
	374-898C	WRAP ASSY (CBT-2172X)	SP
	374-962C	WRAP ASSY (CBT-2172E)	SP
	120-180D	SPEAKER (CBT-2172E/M)	SP
	374-898D	WRAP ASSY (CBT-2172M)	SP

LOCATION NO.	PART NO.	DESCRIPTION	RE-MARKS